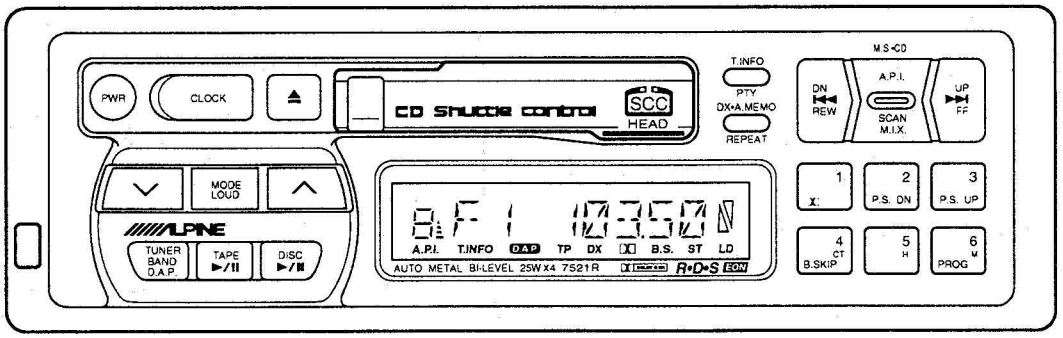
ALPINE

SERVICE MANUAL

FM/MW/LW/RDS Cassette Receiver

CD Shuttle Controller

- For the cassette deck mechanism parts (GR75H110/120) of the model, refer to the Service Manual•GR/GR-Y Series (68P20504W07)



7521R

7521R/7515R

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Specifications

FM RADIO

Intermediate Frequency	10.7±0.1MHz
Frequency Range	87.5~108MHz
Usable Sensitivity (Mono at 98.1MHz)	17.2dBf
Limiting Sensitivity (-3dB, at 98.1MHz)	19.2dBf
S / N Ratio (Stereo at 98.1MHz)	56dB
Image Rejection (at 106.1MHz)	40dB
IF Rejection (at 90.1MHz)	60dB
Distortion (Input 1mV at 98.1MHz)	1%
Frequency Response (Ref. 400Hz, at 98.1MHz)	100Hz : 0±3dB
	10kHz : -12±3dB
Stereo Separation (98.1MHz)	20dB
PS Sensitivity (98.1MHz)	36.2dBf
TP Sensitivity (98.1MHz)	36.2dBf

MW RADIO

Intermediate Frequency	450kHz
Frequency Range	531~1,602kHz
Usable Sensitivity (20dB S / N, at 999kHz)	34dB
S / N Ratio (at 999kHz)	44dB
Image Rejection (at 1,404kHz)	50dB
IF Rejection (at 603kHz)	60dB
Distortion (at 999kHz)	1.5%
Frequency Response (Ref. 400Hz, at 999kHz)	100Hz : -3±4dB
	4kHz : -12+6, -12dB

LW RADIO

Intermediate Frequency	450kHz
Frequency Range	153~281kHz
Usable Sensitivity (20dB S / N, at 216kHz)	41dB
S / N Ratio (at 216kHz)	42dB
Image Rejection (at 270kHz)	40dB
IF Rejection (at 162kHz)	50dB
Distortion (at 216kHz)	1.5%
Frequency Response (Ref. 400Hz, at 216kHz)	100Hz : -3±4dB
	4kHz : -12+6, -12dB

TAPE PLAYER

Wow & Flutter (JIS WRMS, MTT - 111N)	0.2%
Tape Speed (MTT - 111N)	4.76cm / sec. +3 to -1%
S / N Ratio (MTT - 212N) Dolby OFF	Normal : 52dB
	Metal : 58dB
Distortion (MTT - 118N)	2%
Frequency Response (Ref. 1kHz, MTT - 256)	63Hz : -4dB
	12.5kHz : -4dB
Separation (MTT - 141N)	35dB
Crosstalk (MTT - 121N)	45dB
FF & REW Time (C - 60)	115sec.

GENERAL

Power Supply	DC14.4V
Power Output / Impedance	11W / ch / 4ohm
Pre Output Voltage / Impedance	1V / 10kohm
Semiconductors	21 IC's, 42 Transistors, 25 Diodes, 8 Zener Diodes, 1 FET (○)
	20 IC's, 38 Transistors, 25 Diodes, 5 Zener Diodes, 1 FET (●)
Dimensions (W×H×D)	Chassis : 178×50×153 mm
	Nose : 171×48×22 mm
Weight	1.4kg

NOTE : Due to Continuing product improvement, specifications and designs are subject to change without notice.
○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common

Error Indication for CD Shuttle

INDICATION	CAUSE	SOLUTION
ERROR-01	Disc-change malfunction.	Consult your Alpine dealer.
	Disc-change malfunction.	Press the magazine eject button and pull out the Magazine. Check for error indication. Insert the magazine again. If the magazine can not be pulled out, consult your Alpine dealer.
	Magazine ejection impossible.	Press the magazine eject button. If the magazine does not eject, consult your Alpine dealer.
ERROR-02	Disc is in player mechanism.	Press the magazine eject button, and insert an empty magazine.
- - - H	High temperature.	Will disappear when the temperature returns to operation range.
EEEE	Misconnection or disconnection of CD Shuttle.	Check connection between CD Shuttle and control unit.

Indication for 7521R/7515R

INDICATION	MEANING
NO MAGZN	The magazine is not installed into the CD Shuttle.
NO D I S C	No discs are in the magazine.

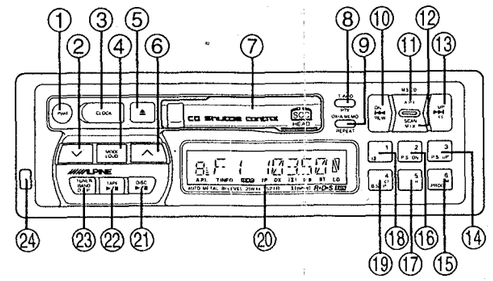
7521R / 7515R

Features

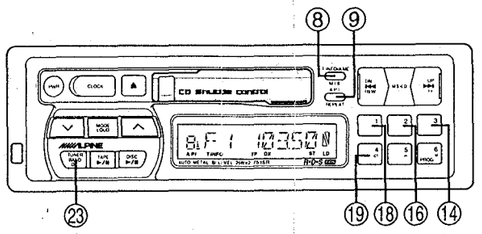
- **FULL FRONT DIN™ CHASSIS**
- **CD SHUTTLE™ CONTROL**
- **DETACHABLE FRONT PANEL**
- **GR-HIGH PRECISION/LOW NOISE FULL LOGIC**
- **AUTO METAL**
  When a metal cassette tape is inserted, the mechanism automatically adjusts to metal tape equalization.
- **P.S. (PROGRAM SENSOR) (7521R only)**
  Program Sensor allows skipping up to 9 tracks on the tape in either forward or reverse directions.
- **SCC TAPE HEAD™ (7521R only)**
  The SCC tape head provides an exceptionally flat frequency response.
- **A.P.I. (AUTO PROGRAM IDENTIFICATION)**
  While A.P.I. function turns on in the FM mode, a best receptive RDS station which has same program as the station you are receiving automatically can be received.
- **T. INFO (TRAFFIC INFORMATION)**
  While T. INFO function turns on, a traffic information service automatically can be received when a station transmit.
- **D.A.P. (DIRECT ACCESS PRESETS) (7521R only)**
- **INTELLIGENT AUTO MEMORY**
  In the Auto Memory mode, the 6 strongest stations in each band will be stored automatically in the memory presets.
- **REPEAT (TAPE, CD) (7521R only)**
- **REPEAT (CD) (7515R only)**
- **SCAN (TAPE, CD) (7521R only)**
- **BLANK SKIP (7521R only)**
- **DOLBY* NOISE REDUCTION (7521R only)**
- **S.T.M. (SOURCE TONE MEMORY)**
  Automatically memorizes the settings of your Bass/Treble Controls for each source.
- **DUAL PRE-AMP OUTPUTS**
  Dual pre-amp outputs, along with a pre-amp fader, make easy and complete system expansion possible.
- **LITETOUCH™ 30-STATION PRESETS (7521R only)**
  FM1 : 6, FM2 : 6, MW : 6, LW : 6, D.A.P.: 6
- **LITETOUCH™ 24-STATION PRESETS (7515R only)**
  FM1 : 6, FM2 : 6, MW : 6, LW : 6
- **DIGITAL CLOCK**

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol (DD) are trademarks of Dolby Laboratories Licensing Corporation.

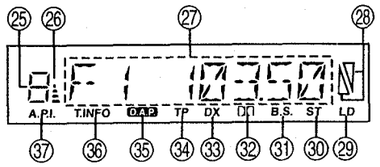
Controls and Indicators



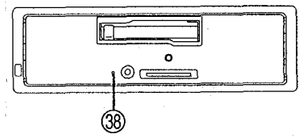
7521R



7515R



7521R



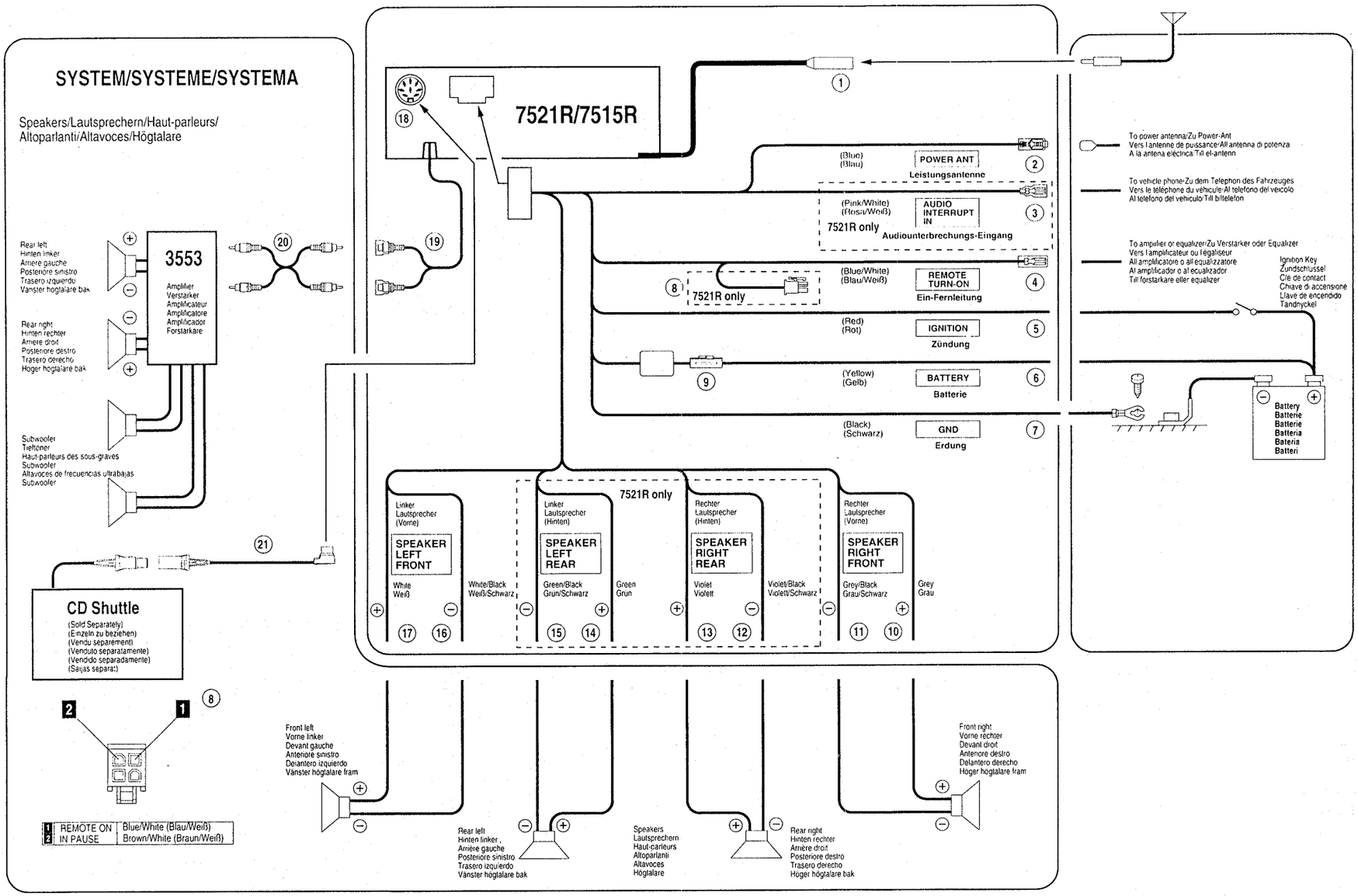
FRONT PANEL

① PoWeR Button
② Level Down Button
③ CLOCK Button
④ Audio MODE Select Switch/ LOUDness Button
⑤ Eject Button
⑥ Level Up Button
⑦ Cassette Loading Slot
⑧ Traffic INFOrmation/Program TYpe Button (7521R only)
⑧ Traffic INFOrmation/Auto MEmory/ M.I.X. Play Button (7515R only)
⑨ DX (Local/Distance)/Auto MEMOry/ REPEAT Button (7521R only)
⑨ Auto Program Identification/ REPEAT Button (7515R only)
⑩ DN/REW Switch (⏮)
⑪ Auto Program Identification Button (7521R only)
⑫ SCAN/M.I.X. Play Button (7521R only)
⑬ UP/FF Switch (⏭)
⑭ Preset and Direct Disc Access No. 3/P.S. UP Button (7521R only)
⑭ Preset and Direct Disc Access No. 3 Button (7515R only)
⑮ Preset and Direct Disc Access No. 6/PROGram/Minutes Button
⑯ Preset and Direct Disc Access No. 2/P.S. DN Button (7521R only)
⑯ Preset and Direct Disc Access No. 2 Button (7515R only)
⑰ Preset and Direct Disc Access No. 5/Hour Button
⑱ Preset and Direct Disc Access No. 1/Dolby B NR Button (7521R only)
⑱ Preset and Direct Disc Access No. 1 Button (7515R only)
⑲ Preset and Direct Disc Access No. 4/Blank SKIP/Clock Time Button (7521R only)
⑲ Preset and Direct Disc Access No. 4/Clock Time Button (7515R only)
⑳ Display
㉑ DISC (Play/Pause ▶/II) Button
㉒ TAPE (Play/Pause ▶/II) Button
㉓ TUNER/BAND/Direct Access Preset Button (7521R only)
㉓ TUNER/BAND/DX (Local/Distance) Button (7515R only)
㉔ Release Button
㊳ Reset Switch

DISPLAY

㉕ Preset Channel/Disc Number Indicator
㉖ Preset Indicator
㉗ Digital Display
㉘ Tape Direction Indicators
㉙ LD Indicator
㉚ ST Indicator
㉛ B.S. Indicator (7521R only)
㉜ Dolby NR Indicator (7521R only)
㉝ DX (Distance) Indicator
㉞ TP indicator
㉟ D.A.P. Indicator (7521R only)
㊱ T. INFO Indicator
㊲ A.P.I. Indicator

Connections



English

- Be sure to disconnect the negative cable from the (—) pole of the battery before connecting your 7521R/7515R to avoid short circuits.
- When replacing a blown fuse make sure to replace it against one of the same strength, as indicated on the fuse holder.
- Be sure to connect the colour coded leads correctly according to the diagram. Otherwise malfunctioning of the unit and/or damage to the vehicle may occur.
- Be sure to connect the speaker (—) leads to the speaker (—) terminal. Never connect left and right channel speaker cables to each other or to the vehicle body.
- This unit is designed for 12V DC systems with negative pole grounded. Make sure that your vehicle has this type of electrical system before connecting the power cable.
- You must be very careful when connecting wires to the vehicle's electrical system. Be sure you do not use leads of factory installed components (like an on-board computer). When connecting the 7521R/7515R to the fuse box, make sure the fuse for the intended circuit of the 7521R/7515R has the appropriate amperage. Failure to do so may result in damage to the unit and/or the vehicle. When in doubt, consult your ALPINE dealer.
- The 7521R/7515R uses female RCA-type jacks for connection to other units (e.g. amplifier) having RCA connectors. You may need an adaptor to connect other units. If so, please contact your authorized ALPINE dealer for assistance.

7521R / 7515R

Operation

● BASIC OPERATION

Reset

Remove the detachable front panel, and the Reset switch can be found.

Press this switch first, whether operating the system independently or combining the system with the changer. In this case, a noise may occur, so temporarily set the sound volume control on the head unit to zero.

How to adjust the volume and tone (Refer to the diagram on next page.)

1. Turn On the system by pushing the PWR button ① or any other button (other than CLOCK ③ or Eject ⑤).
2. Press the Audio MODE Select switch ④ to select each adjusting mode.

┌→TREB → BASS → BAL → FAD → VOL ─┐

Each time this switch is pressed, the mode changes. The mode is indicated in the display. The mode indicator changes as each mode is selected.

Power Off

Press the PWR button ① to turn the unit Off.

Loudness

1. Press the LOUD button ④ for more than 2 seconds to activate the loudness function.
2. Press the LOUD button ④ for more than 2 seconds again to defeat this feature.

Mode Switching of the 7521R/7515R

1. Radio Mode
   Press the BAND button ㉓ to put the unit into the radio mode. The Band indicator (F1, F2 or MW/LW) will appear in the display.
2. Cassette Player Mode
   Press the TAPE button ㉒ to put the unit into the cassette player mode.
3. CD Shuttle Mode
   Press the DISC button ㉑ to put the unit into the CD mode.

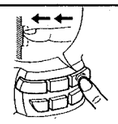
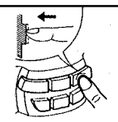
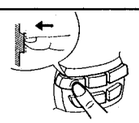
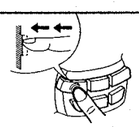
Four Modes Setting Function

This unit allows setting of four modes shown below. For further details, refer to the description on each mode.

Preset No. 1: FM level switching.
Preset No. 2: Sound volume setting during reception of traffic information.
Preset No. 3: Switching of automatic tracing function. (A.P.I. 1/A.P.I. 2/PS ONLY)
Preset No. 4: Regional program on/off switching.

Level Up/Down Button Operation

The display will return to the volume mode indication after 5 seconds.

PUSH STROKE	SPEED OF CHANGE	VOLUME	TREBLE	BASS	BALANCE	FADER
	FAST	UP	BOOST	BOOST	Left-ch Decreases	Rear-ch Decreases
	SLOW	UP	BOOST	BOOST	Left-ch Decreases	Rear-ch Decreases
	SLOW	DOWN	CUT	CUT	Right-ch Decreases	Front-ch Decreases
	FAST	DOWN	CUT	CUT	Right-ch Decreases	Front-ch Decreases

S.T.M. (Source Tone Memory)

The Bass and Treble controls can be individually set for each source (FM, MW/LW, Tape, and CD). Once set, their positions are automatically memorized. Whenever the source is reselected, the Bass and Treble controls will return to your preset configuration.

● RADIO OPERATION

Tuning Band Selection

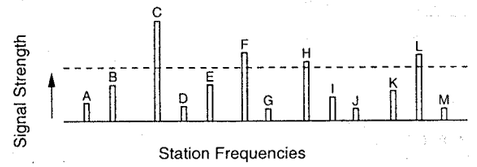
Press the BAND button ㉓ to select the desired tuning band. The Band indicator shows your selection.

Local/Distance (DX) Seek Sensitivity for FM, MW and LW

You can select the radio seek sensitivity (local or distance (DX)), by pressing the DX (local/distance) button ⑨ (㉓ for 7515R).

In the local mode, with no DX indicator ㉝, the radio tunes in only strong stations (stations C, F, H and L in the illustration below).

In the distance mode, with DX indicator ㉝, the radio tunes in both strong and weak stations (all stations from A to M in the illustration).



Manual and Auto Seek Tuning

Stations can be tuned in using the procedures described below.

1. Select the tuning band (FM1, FM2, MW or LW) with the BAND button ㉓. The Band indicator shows your selection.

┌→ F1 → F2 → MW → LW ─┐

2. Decreasing the frequency:
   The frequency is decreased by one step each time the DN switch ⑩ is pressed. By pressing and holding the switch for at least 0.5 seconds, the unit will automatically tune the first station it finds in the direction of decreasing frequency.
3. Increasing the frequency:
   The frequency is increased by one step each time the UP switch ⑬ is pressed. By pressing and holding the switch for at least 0.5 seconds, the unit will automatically tune to the first station it finds in the direction of increasing frequency.

Preset Memory Programming

Follow the instructions below to program stations into preset memory:

1. Select the tuning band (FM1, FM2, MW or LW) with the BAND button ㉓.
2. Tune in your desired station using manual or auto seek tuning.
3. Press the Preset button number 1 ⑱ for more than 2 seconds.
4. The preset indicator ㉖ and the digital display ㉗ will begin to blink. Press that Preset button again while the display is blinking (within 5 seconds).

5. The frequency you selected will be placed into preset memory number 1 and will appear in the display.
   NOTE:
   If a preset memory has already been set in the same address, it will be cleared and the new station will be memorized.
6. Follow steps 2 – 4 for the remaining presets (2 – 6). Use this procedure for FM1, FM2, MW and LW.

Auto Memory Preset

1. Select the desired tuning band (FM1, FM2, MW or LW) with the BAND button ㉓. The Band indicator shows your selection.
   NOTE:
   The auto memory preset procedure is allowed in the D.A.P. mode (7521R only).
2. Press the A. MEMO button ⑨ (A. ME button ⑧ for 7515R) for over 2 seconds.
3. The tuner will automatically seek the 6 strongest stations in the selected band and memorize them in order of their signal strength. These stations are automatically placed in the preset memory with the strongest station in preset No. 1 and the 6th strongest station in preset No. 6. When seeking stations, the tuner first seeks in the local tuning mode. If less than 6 stations are memorized, the tuner seeks again in the distance (DX) mode.
4. After finishing the auto memory preset, the tuner goes to the station placed in preset memory No. 1. If no stations are memorized, it returns to the original station you were listening to before the auto memory preset procedure began.

Preset Tuning

After the preset stations have been memorized, you can tune in your desired station (within the band displayed) with one touch of a button.

1. Select the tuning band (FM1, FM2, MW or LW) with the BAND button ㉓.
2. Press any one of the Preset buttons (⑭ – ⑲) and the number of that preset will appear in the preset channel indicator ㉕.
3. The frequency of the station placed in the selected preset location will appear in the display.

D.A.P. (Direct Access Preset) (7521R only)

This feature allows the storage of FM, MW and LW presets on the same band.

1. Press the D.A.P. button ㉓ to light up the D.A.P. indicator ㉟.
2. To program stations into the D.A.P. band, follow steps 1 – 4 as described in the Preset Memory Programming section above.

Accessing the D.A.P. Presets (7521R only)

1. Press the D.A.P. button ㉓. The D.A.P. indicator ㉟ will illuminate in the display.
2. Press one of the Preset buttons (⑭ – ⑲).
3. The frequency of the station placed in the selected D.A.P. location will appear in the display.

Switching the FM Volume

Use this function if the difference in volume is great when switching between a tape and the FM radio.

1. Press the PWR button ① for 3 seconds.
2. Press the Preset No. 1 button ⑱ to switch the display between "FM-LV H" and "FM-LV L".
   The FM volume can be set to one of two positions, high or low. Set the position according to the broadcast station.

● TAPE PLAYER OPERATION

Turn the unit On and press the TAPE (▶/II) button ㉒ to access the tape mode.

Dolby* B Noise Reduction (7521R only)

Before playing a cassette tape, check to see if it is encoded with Dolby B noise reduction.

Press the Dolby B NR button ⑱ when playing a Dolby NR encoded tape. The Dolby B NR indicator ㉒ will illuminate.

Cassette Loading

1. Insert a prerecorded cassette tape into the cassette loading slot ⑦ with the open side facing to your right.
2. If the cassette tape is not completely loaded into the deck, lightly press the cassette into the slot.

Eject

Press the Eject button ⑤ to eject the cassette from the tape mechanism.

Pause

To temporarily stop playback, press the TAPE (▶/II) button ㉒. To resume playback, press the same button again.

Playback

1. Insert a prerecorded cassette tape with the open side facing right. The playback begins immediately.
2. If a cassette tape is already loaded in the unit, press the TAPE (▶/II) button ㉒ to start playback.
3. To stop tape play, press the Eject button ⑤ or turn the power Off with the PWR button ①.

True Fast Forward and Rewind

1. Press the FF switch ⑬ to advance the tape quickly. Press the REW switch ⑩ to rapidly run the tape backward. The deck will perform these functions correctly regardless of the tape play direction.
2. To disengage the FF or REW function, press the TAPE (▶/II) button ㉒.

Program Sensor (7521R only)

1. To advance the tape to the beginning of the next musical track, press and release the P.S. UP button ⑭. The display will show "PS UP + 1" as shown below. Successive pressing of this button will increase the number of tracks to be skipped as the tape advances. The number in the display will increase accordingly. For example, to go from track 1 to track 4, press the P.S. UP button ⑭ three times (the number in the display will be "+3"). The tape deck searches for blank sections between tracks to the beginning of track 4 and begins playback.
2. To access the beginning of the current musical track, press and release the P.S. DN button ⑯. The display will show "PS DN –1". Successive pressing of this button will increase the number of tracks to be skipped as the tape rewinds. The number in the display will increase (in the negative direction) accordingly. For example, to go from track 5 to track 4, press the P.S. DN button ⑯ twice (the number in the display will be "–2" as shown below). The tape deck searches for blank sections between tracks to the beginning of the track 4 and begins playback.

[Example]

NOTE:
The P.S. cannot detect blank sections of less than 3 seconds.

Auto Reverse

When the tape is played or fast-forwarded to the end, the tape transport automatically reverses the tape direction and playback begins.

Manual Reverse

To manually change playback direction (switch between side A and side B), press the PROG button ⑮.

Repeat (7521R only)

1. Insert the cassette tape and begin playback.
2. When you find a selection you would like to repeat, press the REPEAT button ⑨. This selection will be continuously repeated until the repeat function is disengaged.
3. To cancel the repeat function, press the REPEAT button ⑨ again.

7521R / 7515R

Scan (7521R only)
1. Press the SCAN button ⑫ and the deck will play the first 10 seconds of each selection. This feature is convenient when searching for a particular selection on a tape.
2. Once you have located your desired selection, press the SCAN button ⑫ again to defeat this function.

Blank Skip (7521R only)
1. Press the B. SKIP button ⑲ during playback to skip over any blank sections of tape lasting 15 seconds or more.
2. To cancel the blank skip function, press the B. SKIP button ⑲ again.

Head Cleaning

When playback sound quality begins to deteriorate, it is time to clean the tape head. Insert a special head cleaning cassette into the tape deck and allow it to run for approximately 1 minute to remove any foreign matter. There are special cleaning cassettes that also clean the capstans and pinch rollers. Please contact your authorized Alpine dealer for information about these cleaning devices.

● CD OPERATION

The following instructions apply only to systems that incorporate the Alpine CD Shuttle with 7521R/7515R.

Turn the unit On and access the CD mode by pressing the DISC (▶/II) button ㉑.

Initial System Turn-On

When operating the system for the first time after installation or after the vehicle's battery has been disconnected and reconnected, press the Reset switch with a sharp pencil or other pointed object.

Normal Play
1. Press the DISC (▶/II) button ㉑.
2. The first disc will begin playback.
3. After the last track on the last disc is played back, the pickup will return to the beginning of the first track of the first disc and begin playback from that point.

Pause

While the disc is playing, press the DISC (▶/II) button ㉑ to temporarily stop playback. To resume playback, press the DISC (▶/II) button ㉑ again.

Music Sensor (Skip)

This feature allows you to access the beginning of your musical track selection simply and quickly. It is functional in the play or pause mode. The digital display ㉗ shows the track number you have selected.

- To advance to the next track on the disc, press the UP/FF switch ⑬.

1. Playback stops, and the pickup moves up to the beginning of the next track. That track number appears in the digital display ㉗.
2. Playback begins immediately.
3. If you wish to access a track further ahead on the disc, continue pressing and releasing the UP/FF switch ⑬ until you reach the track of your choice.

- To replay the track that is currently playing, press and release the DN/REW switch ⑩.

1. Playback stops, and the pickup moves back to the beginning of the current track. The track number in the digital display ㉗ remains the same.
2. Playback begins immediately from the beginning of the track.
3. If you access a track further towards the beginning of the disc, continue pressing and releasing the DN/REW switch ⑩ until you reach the track of your choice.

Direct Disc Access
1. Press one of the Direct Disc Access buttons (⑭ – ⑲) to select from discs 1 – 6. The disc and track numbers will appear in the display.
2. Press the UP/FF ⑬ or DN/REW ⑩ switch for musical track selection.

Fast Forward/Fast Backward

The fast forward/fast backward feature works in the play mode only.
1. Press either the FF ⑬ or the REW ⑩ switch and hold it down for more than 1 second.
2. To move the pickup forward rapidly, hold down the FF switch ⑬.
3. To move the pickup backward rapidly, hold down the REW switch ⑩.
4. Release the button when you get to the desired position on the disc.
5. When the pickup reaches the end of the disc, it will begin playback from the beginning of the first track on the next disc.

Repeat (One/All)

This feature allows you to continuously repeat a single track or one entire disc.

To Repeat a Single Track
1. Locate the music track of your choice using the UP ⑬ or DN ⑩ switch.
2. Press the REPEAT button ⑨.
   The REPEAT indicator will illuminate on the digital display ㉗.
   The music track will be played back repeatedly.
3. To stop repeat play, press the REPEAT button ⑨ twice.

To Repeat an Entire Disc
1. While playing a disc, press the REPEAT button ⑨ until the ALL indicator will illuminate.
2. The disc will be played back repeatedly.
3. To stop repeat play, press the REPEAT button ⑨ once. The indicator illumination will be off.

Disc Scan (7521R only)

Press the SCAN button ⑫ and the unit will playback the first 10 seconds of each track in succession. This function is useful in searching ahead on a disc for a specific selection. Pressing the SCAN button ⑫ a second time deactivates the function.

M.I.X. (Random Play)

Press the M.I.X. button ⑫ (⑧ for 7515R) while the unit is in the play or pause mode. Musical tracks on the selected disc will be played back in a random sequence generated by the microprocessor. After all the tracks on the disc have been played back once, the player will begin a new random sequence.

7521R / 7515R

● CLOCK OPERATION

RDS Clock

1. Press the CLOCK button ③. The clock time will appear on the display.

NOTE:

If the unit power is off. The unit shows the clock time unless the vehicle's ignition switch is not off.

2. The clock is automatically corrected, the digital display ㉗ showing "RDS", when RDS CT data is received.

RDS 12 : 00

NOTE:

If the RDS signal in reception is weak, the time adjustment by RDS function may require a little longer time.

3. If the unit shows incorrect time caused by a wrong signal, adjust the time manually by referring to "Setting the Time" below.

Normal Clock

1. Press and hold the CLOCK button ③ for more than 3 seconds.
2. Press the CT button ⑲ to deactivate the RDS function.
3. Adjust the time by referring to the "Setting the Time" below.

12 : 00

4. To turn off the clock indication, press the CLOCK button ③ again.

Clock display priority function

When the clock time is being displayed, the unit is set to the "Clock display priority mode".

When an operation of FM, MW, LW, Cassette, etc. is conducted, that operation mode is once indicated on the display, but the clock indication is automatically resumed after 5 seconds.

Setting the Time

1. Press and hold the CLOCK button ③ for more than 3 seconds to enable the time adjust mode. The time display will blink when ready for setting.

NOTE:

Make adjustments for 5 seconds blinking.

2. Adjusting the hours:
   Use H button ⑰ to adjust the hours.
3. Adjusting the minutes:
   Use M button ⑮ to adjust the minutes.

● Handling the Detachable Front Panel

Removal

1. Press the PWR button ① to turn the power Off. (Fig. 2)
2. Press the Release button. (Fig. 2)
3. The detachable front panel pops out. Grasp part of it and pull it off. (Fig. 3)

NOTE:

After removing the detachable front panel, place it in the included case and protect it from strong shocks (7521R only).

Installation

1. Check that there is no dirt, etc., in the grooves on the unit, then insert the detachable front panel from the right side. (Fig. 4)
2. Press on the detachable front panel at a point other than the button surface on the left side until a click is heard. (Fig. 5)
3. Touch the detachable front panel and check that it is securely fastened.

NOTE:

Be sure to check that there is no dirt, dust, etc., on the connector terminals for the detachable face and unit before installing it.

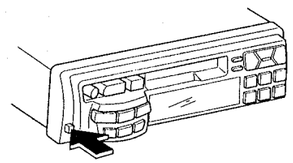


Fig. 2

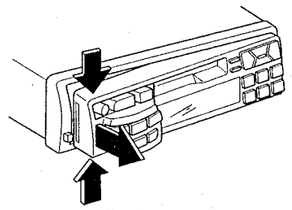


Fig. 3

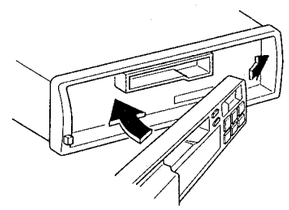


Fig. 4

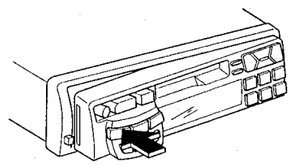


Fig. 5

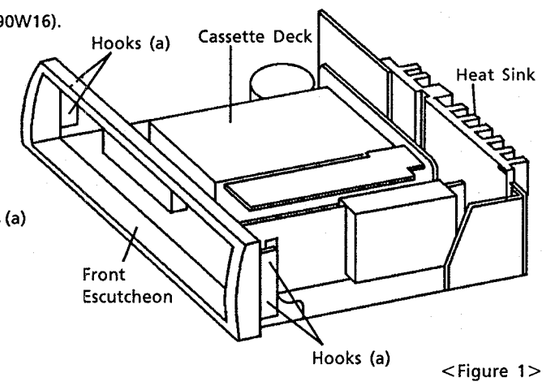
Disassembly Instructions

1. Removal of Nose Unit

(1) Refer to the Owner's Manual (Part No. 68P50390W16).

2. Removal of Front Escutcheon

(1) After removal of Top Cover, remove the Hooks (a) as shown in Figure 1.



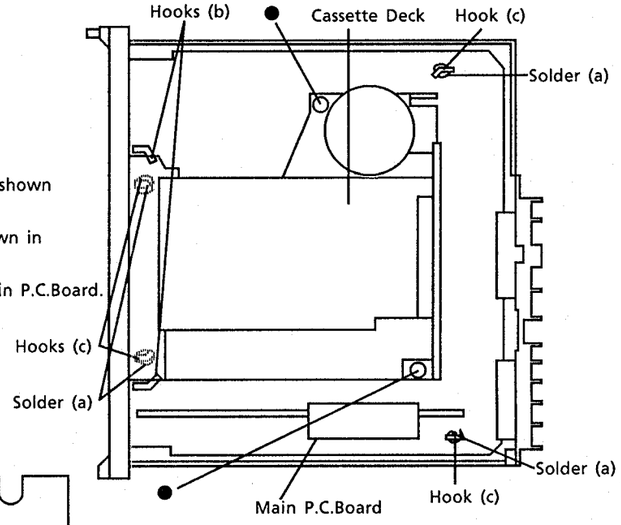
<Figure 1>

3. Removal of Cassette Deck

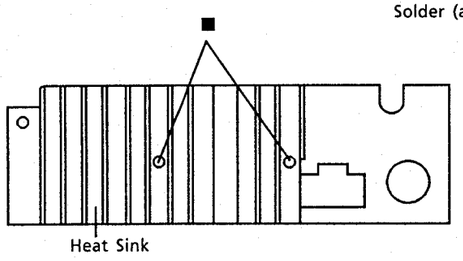
(1) Remove the Hook (b) as shown in Figure 2.
(2) Remove two screws marked "●" as shown in Figure 2.
(3) Disconnect one Connector from the Cassette Deck.

4. Removal of Main P.C.Board

(1) Remove the Solder (a) and Hooks (c) as shown in Figure 2.
(2) Remove two screws marked "■" as shown in Figure 3.
(3) Disconnect two Connectors from the Main P.C.Board.



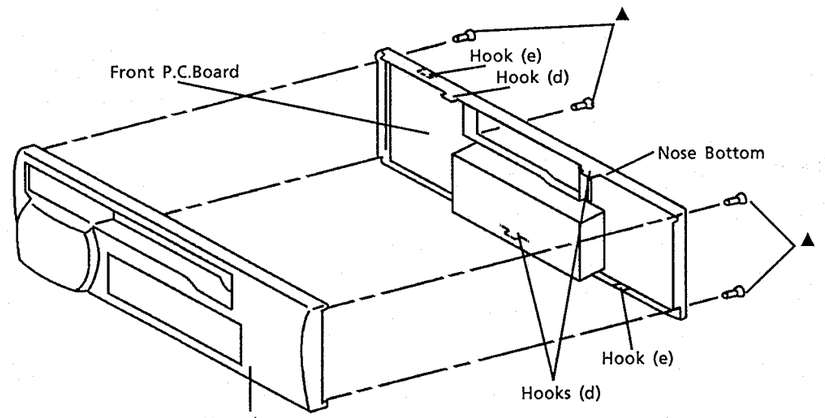
<Figure 2>



<Figure 3>

5. Removal of Front P.C.Board

(1) After removal of Nose Unit, remove four screws marked "▲" and the Hooks (d) as shown in Figure 4.
(2) Remove the Hooks (e) as shown in Figure 4.



<Figure 4>

Description of IC Terminal

45609W13 (IC510)

No.	Symbol	I / O	Terminal Description
1	NOSE ON	I	Front panel detection terminal.
2	AV_{REF}	—	Reference voltage input terminal.
3	V_{DD}	—	Positive power supply.
4	V_{DD}	—	Positive power supply.
5	REF+B	—	Reference voltage input terminal.
6	PLY SOL.	O	Attracts PLAY SOL and maintains HEAD BASE moved forward.
7	RF SOL.	O	Sets FF, REW, CUE or REV mode by pulling RF SOL so that PINCH ROLLER is retracted from capastan shaft.
8	EJECT SOL.	O	Performs EJECT operation by pulling EJECT SOL to engage EJECT GEARS and to rotate motor in clockwise direction.
9	MOTER CONT	O	Determines rotation direction of motor in GR mechanism.
10	O. MOTER	O	Determines start and stop of the motor in GR mechanism.
11	F / R	O	Determines running direction of tape depending upon rotation direction of motor. This signal is used to switch running direction and PRE AMP EQ circuit.
12	O. FAST	O	Signal to vary gain when judging blank space between programs in MS-IC because of different signal levels in PLAY and CUE & REV.
13	PK IN SW	I	Switch to detect cassette is installed into cassette holder or not. Pulled-up through 10K~50Kohm resistor connected to BAT+5V.
14	MS. DET	I	Music ON / OFF switching signal input terminal from MS-IC.
15	GND	—	GND short.
16	GND		
17	GND	—	GND short.
18	$\overline{7521}$ / 7515	I	7521 / 7515 set up terminal.
19	GND	—	GND short.
20	TP ALM	I	Alarm Output / audio signal switching Output terminal.
21	NOSE PWR	O	Power supply control terminal for Front panel.
22	POW IC ON	O	Power IC stand by control terminal.
23	PWR ON	O	System power supply control terminal.
24	$\overline{MUTE}$	O	Audio mute signal output terminal.
25	O. REM	O	Remote signal output terminal.
26	LCD+B ON	O	LCD Power Supply control terminal.
27	IN PAU	I	Pause signal input terminal.
28	IN INT	I	Interrupt signal input terminal.
29	CHG OUT	O	CD Changer bus line data output terminal.
30	EV CLK	O	Clock output terminal for electrical volume (IC201).

No.	Symbol	I / O	Terminal Description
31	EV DATA	O	Serial data output terminal for electrical volume (IC201).
32	NC	—	Open.
33	Vss	—	GND potential terminal.
34	NC	—	Open.
35	T/$\overline{R}$	O	TAPE / RADIO audio signal switching output terminal.
36	DOLBY	O	Dolby B NR. ON signal output terminal.
37	LCD CE	O	Stand by control terminal to Display microcomputer (IC402, 403).
38	DTS CE	O	Stand by control terminal to DTS microcomputer.
39	DTS START	I	Command sync signal input terminal from DTS microcomputer.
40	KEY P / S	O	P / S output terminal to IC401.
41	KEY IN	I	Key data input terminal from shift resistor (IC401).
42	LCD / KEY CLK	O	Communication sync signal output terminal to Display microcomputer (IC402, 403).
43	LCD DATA 1	O	Serial data output terminal to Display microcomputer (IC403).
44	LCD DATA 2	O	Serial data output terminal to Display microcomputer (IC402).
45	$\overline{\text{LCD INH}}$	O	INH signal input terminal to IC402, 403.
46	$\overline{\text{DTS MUTE}}$	I	Audio mute signal input terminal from DTS microcomputer.
47	ACC+5	—	ACC power supply detection terminal.
48	CHG IN	I	CD Changer bus line data input terminal.
49	GND	—	GND Short.
50	DTS STS	I	Serial data signal input terminal from DTS microcomputer.
51	DTS CMD	O	Serial data signal input terminal to DTS microcomputer.
52	$\overline{\text{DTS SCK}}$	I	Communication sync signal input terminal from DTS microcomputer.
53	BAT+5	—	Battery power supply detection terminal.
54	Vss	—	GND potential terminal.
55	XT1	—	Crystal element connection terminal for sub system clock OSC.
56	NC	—	Open.
57	Vss	—	GND short.
58	X1	—	Ceramic element connection terminal for system clock OSC. (4.19MHz).
59	X2	—	Ceramic element connection terminal for system clock OSC. (4.19MHz).
60	$\overline{\text{RESET}}$	I	System reset input terminal.
61	DTS STBY	O	Stand by pulse output terminal to DTS microcomputer.
62	GND	—	GND short.
63	GND	—	GND short.

No.	Symbol	I / O	Terminal Description
64	GND	—	GND short.
65	GND	—	GND short.
66	GND	—	GND short.
67	GND	—	GND short.
68	GND	—	GND short.
69	GND	—	GND short.
70	GND	—	GND short.
71	GND	—	GND short.
72	GND	—	GND short.
73	AVss	—	GND short.
74	GND	—	GND short.
75	GND	—	GND short.
76	PK DN SW	I	Switch to detect cassette holder is moved down completely. Pulled - up through 10K~50Kohm resistor connected to BAT+5V.
77	RUN DET	I	Signal showing take-up reel is rotaring or not.
78	Vss	—	GND short.
79	GND	—	GND short.
80	GND	—	GND short.

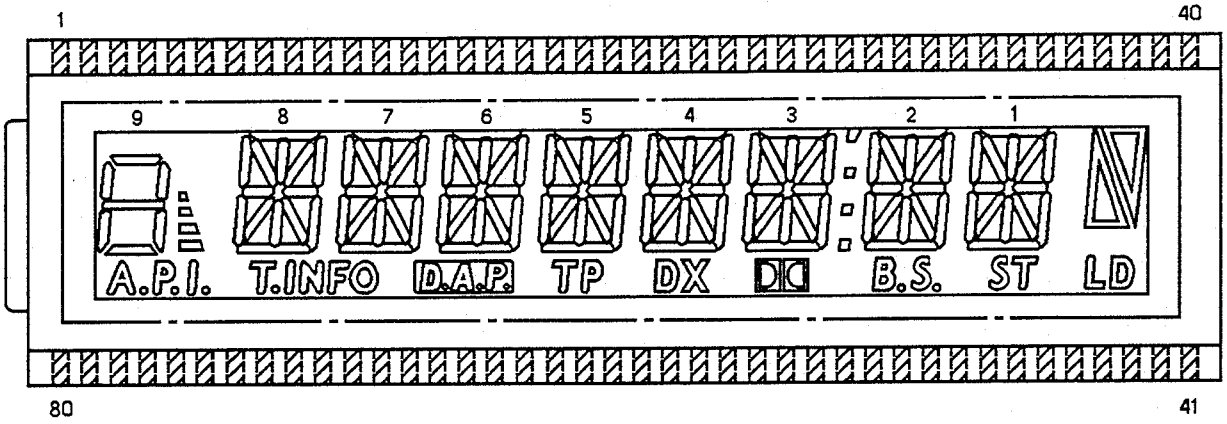
45258W01 (IC511)

No.	Symbol	I / O	Terminal Description
1	R.D	O	Control terminal for S · RAM.
2	NC	—	Open.
3	$\overline{\text{DTS MUTE}}$	O	Audio mute output terminal.
4	$\overline{\text{7073 RESET}}$	O	Control the reset for LC7073.
5	50KREF	O	High output when REF frequency becomes 50kHz in FM mode.
6	$\overline{\text{RESET}}$	I	System reset input terminal.
7	X2	O	Output terminal for system clock OSC.
8	X1	—	Output terminal for system clock OSC.
9	Vss	—	GND terminal for device.
10	SRAM CE2	O	CE2 control terminal for S · RAM.
11	A14	O	Input / Output terminal for S · RAM address signal.
12	NC	—	Open.
13	NC		

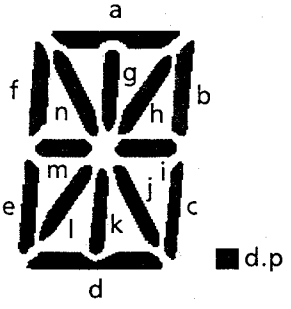
No.	Symbol	I / O	Terminal Description
14	NC	—	Open.
15	A10	O	Input / Output terminal for S · RAM address signal.
16	A9		
17	A8		
18	AD7	I / O	Input / Output terminal for S · RAM address signal.
19	AD6		
20	AD5		
21	AD4		
22	AD3		
23	AD2		
24	Vss	—	GND terminal for device.
25	AD1	I / O	Input / Output terminal for S · RAM address signal.
26	AD0		
27	LE	O	LE control terminal for latch.
28	DTS STBY	I	Return from standby to DTS.
29	RD CL	I	Communication data sync signal input terminal from LC7073.
30	RD ST	I	Data sync signal input terminal from LC7073.
31	DATA	I	Serial data input terminal from LC7073.
32	DI	I	Serial data input terminal.
33	A IN	I	Audio zero cross input terminal.
34	DTS - START	I	Command sync signal input from main microcomputer.
35	DTS - CMD	I	Serial data input terminal from main microcomputer.
36	NC	—	Open.
37	NC		
38	DTS - CLK	I	Communication data sync signal input terminal from main microcomputer.
39	DTS - STS	O	Serial data output terminal to main microcomputer.
40	$\overline{EA}$	I	Power supply terminal.
41	VDD	—	Power supply terminal for device.
42	AVss	—	GND terminal for A / D converter.
43	AVREF	I	Reference Voltage input terminal for A / D converter.
44	$\overline{ST}$	I	Stereo signal input terminal.
45	$\overline{SK}$	I	SK signal input terminal.
46	SERCH	I	Search start level detector port.
47	$\overline{MALTI\ PATH}$	I	Port detects multipath interference of station.

No.	Symbol	I / O	Terminal Description
48	$\overline{\text{ADJON}}$	I	Port detects multipath interference of station.
49	S. METER	I	Signal meter input terminal.
50	$\overline{\text{DK}}$	I	DK signal input terminal.
51	$\overline{\text{RDS}}$	I	RDS signal input terminal.
52	PLL CLK	O	Communication data sync signal output terminal.
53	PLL DO	O	Serial data output terminal.
54	$\overline{\text{LPE SW}}$	O	LPF time constant switching terminal to obtain fast response in AF search and FM seek operation.
55	IF MUTE	O	Mute output terminal to prevent shock noises in AF search operation.
56	PLL CE	O	Data communication control signal output terminal.
57	NC	—	Open.
58	LW	O	LW band selection terminal.
59	F / $\overline{\text{A}}$	O	FM / AM (MW / LW) bands selection terminal.
60	L / $\overline{\text{D}}$	O	SEEK sensitivity switch control output terminal.
61	NC	—	Open.
62	DTS CE	I	Terminal to make DTS in standby status.
63	SD	I	Station detector signal input terminal for FM / AM.
64	WR	O	F·RAM WE control signal.

LCD Display



Pin No	Com 0	Com 1	Com 2	Com 3	Pin No	Com 0	Com 1	Com 2	Com 3	Pin No	Com 0	Com 1	Com 2	Com 3
1	NC	NC	NC	NC	28	3g	3a	NC	NC	55	NC	⋈	NC	NC
2	NC	NC	9g	9f	29	3h	3b	NC	NC	56	NC	DX	NC	NC
3	NC	NC	9b	9a	30	▽	NC	NC	NC	57	4k	4d	NC	NC
4	NC	NC	NC	≡	31	2i	2m	NC	NC	58	4l	4e	NC	NC
5	NC	NC	8m	8i	32	2n	2f	NC	NC	59	NC	NC	5c	5j
6	NC	NC	8f	8n	33	2g	2a	NC	NC	60	NC	NC	TP	NC
7	NC	NC	8a	8g	34	2h	2b	NC	NC	61	NC	NC	5d	5k
8	NC	NC	8b	8h	35	1l	1e	NC	NC	62	NC	NC	5e	5l
9	NC	NC	7m	7i	36	1i	1m	NC	NC	63	NC	NC	6c	6j
10	NC	NC	7f	7n	37	1n	1f	NC	NC	64	NC	NC	6d	6k
11	NC	NC	7a	7g	38	1g	1a	NC	NC	65	NC	NC	D.A.P	NC
12	NC	NC	7b	7h	39	1h	1b	NC	NC	66	NC	NC	6e	6l
13	NC	NC	6m	6i	40	▽	△	NC	NC	67	NC	NC	7c	7j
14	NC	NC	6f	6n	41	Com 0	NC	NC	NC	68	NC	NC	7d	7k
15	NC	NC	6a	6g	42	NC	Com 1	NC	NC	69	NC	NC	7e	7l
16	NC	NC	6b	6h	43	NC	LD	NC	NC	70	NC	NC	T.INFO	NC
17	NC	NC	5m	5i	44	1j	1c	NC	NC	71	NC	NC	8c	8j
18	NC	NC	5f	5n	45	1k	1d	NC	NC	72	NC	NC	8d	8k
19	NC	NC	5a	5g	46	NC	ST	NC	NC	73	NC	NC	8e	8l
20	NC	NC	5b	5h	47	2j	2c	NC	NC	74	NC	NC	A.P.I	9d
21	4i	4m	NC	NC	48	2k	2d	NC	NC	75	NC	NC	9c	9e
22	4n	4f	NC	NC	49	2l	2e	NC	NC	76	NC	NC	NC	NC
23	4g	4a	NC	NC	50	NC	B.S	NC	NC	77	NC	NC	NC	NC
24	4h	4b	NC	NC	51	▫	d.p	NC	NC	78	NC	NC	NC	NC
25	4j	4c	NC	NC	52	3j	3c	NC	NC	79	NC	NC	Com 2	NC
26	3i	3m	NC	NC	53	3k	3d	NC	NC	80	NC	NC	NC	Com 3
27	3n	3f	NC	NC	54	3l	3e	NC	NC					



Adjustment Procedures

1 FM SECTION

(1) Dummy Antenna Circuit

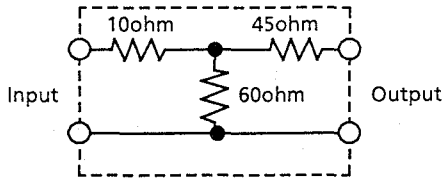


Figure 5

(2) Connections

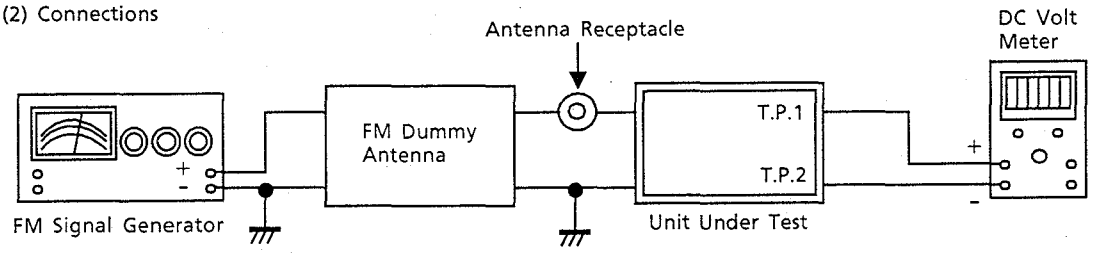


Figure 6

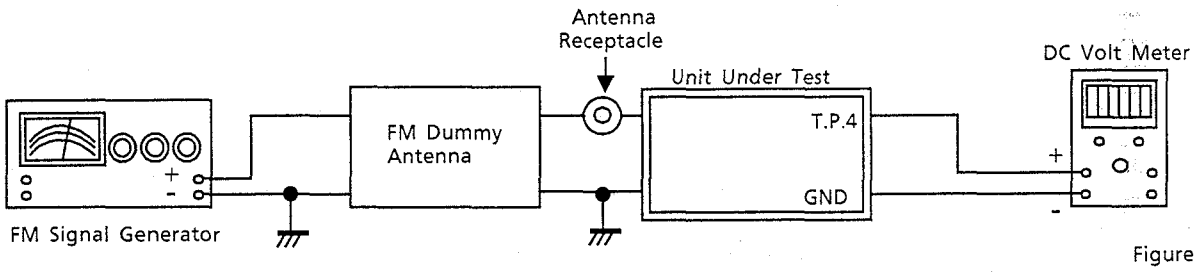


Figure 7

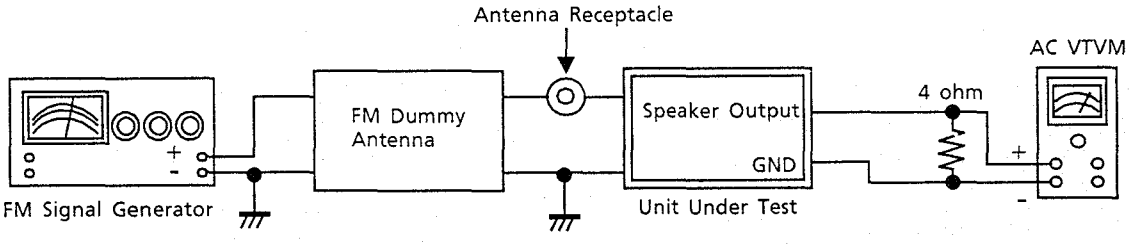


Figure 8

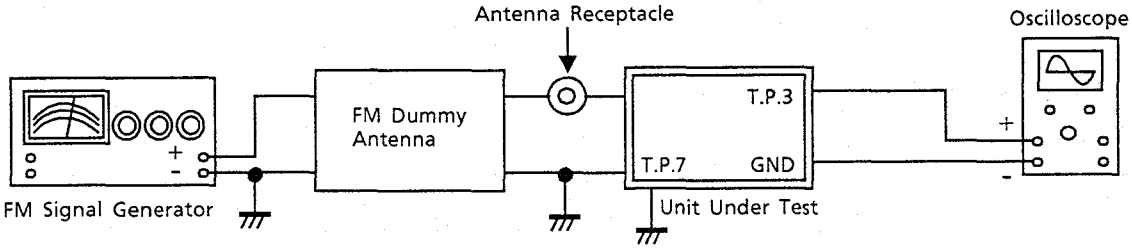


Figure 9

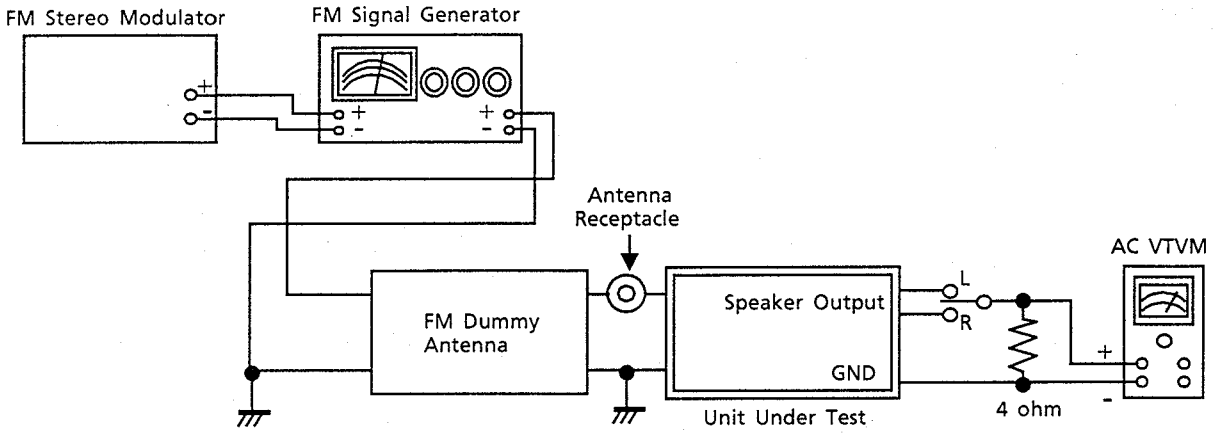


Figure 10

(3) Control Settings

Power Switch ..... ON
Fader Control ..... Center Position
Balance Control ..... Center Position
Treble / Bass Control ..... Center Position
Band Switch ..... FM
Others ..... OFF

(4) Adjustment Procedures

Step	Description		Connection	Signal Generator	Dial Control	Test Point	Adjustment
1	IF Adjustment		Figure 6	98.1MHz, 72dB (Mod. OFF)	98.1MHz	T.P.1 T.P.2	Adjust L2101 to 0±15mV.
2	Signal Meter Adjustment		Figure 7	98.1MHz, 46dB (Mod. 400Hz)	98.1MHz	T.P.4	Adjust VR2101 to 3±0.1V.
3	Noise Level Adjustment	(1)	Figure 8	98.1MHz, 72dB (Mod. 400Hz)	98.1MHz	Speaker Output	Adjust VOLUME to obtain 2V output. This value is 0dB.
		(2)	Figure 8	98.1MHz, - 19dB (Mod. 400Hz)	98.1MHz	Speaker Output	Adjust VR2106 to -30±5dB output at SG level minimum.
4	Seek Stop Adjustment		Figure 9	98.1MHz, 27dB (Mod. OFF)	98.1MHz	T.P.3	Adjust VR2105 to obtain 27±5dB.
5	Stereo Separation Adjustment (Lch)		Figure 10	98.1MHz, 72dB (Stereo 1kHz, Lch only)	98.1MHz	Speaker Output	Adjust VR2104 for Rch output to be minimum and confirm Lch and Rch output level difference is more than 20dB.

Step	Description	Connection	Signal Generator	Dial Control	Test Point	Adjustment
6	Stereo Blend Adjustment (Lch)	Figure 10	98.1MHz, 46dB (Stereo 1kHz, Lch only)	98.1MHz	Speaker Output	Adjust VR2102 for Lch and Rch output level difference to be 8dB.
7	Stereo Separation Adjustment (Rch)	Figure 10	98.1MHz, 72dB (Stereo 1kHz, Rch only)	98.1MHz	Speaker Output	Proceed same adjustment under step 5 by alternating Lch and Rch.
8	Stereo Blend Adjustment (Rch)	Figure 10	98.1MHz, 46dB (Stereo 1kHz, Rch only)	98.1MHz	Speaker Output	Proceed same adjustment under step 6.

2 TAPE PLAYER SECTION

(1) Connections

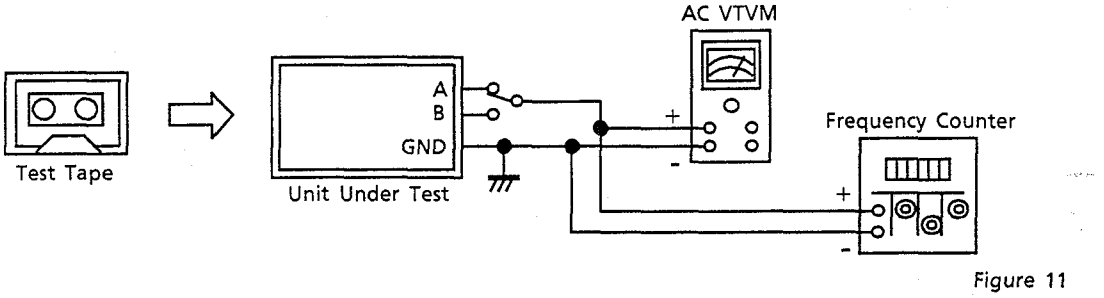


Figure 11

	7521R (○)	7515R (●)
A	T.P.5	SP. OUT L
B	T.P.6	SP. OUT R

(2) Control Settings

Power Switch ..... ON
Fader Control ..... Center Position
Balance Control ..... Center Position
Treble / Bass Control ..... Center Position
Others ..... OFF

(3) Adjustment Procedures

Step	Description	Test Tape	Connection	Test Point	Adjustment Point	Adjustment
1	Head Azimuth Adjustment	MTT - 114NB (14kHz)	Figure 11	○ T.P.5 (Lch) T.P.6 (Rch), ● Speaker Output	Head Azimuth Adjustment Screws (Figure 12)	Adjust for Maximum and same level output at Normal and Reverse positions.
○2	Dolby Level Adjustment	MTT - 150 (400Hz)	Figure 11	T.P.5 (Lch) T.P.6 (Rch)	VR101 (Lch) VR102 (Rch)	Adjust for 245mV at T.P.5 (Lch) and T.P.6 (Rch).
3	Tape Speed Adjustment	MTT - 111N (3kHz)	Figure 11	○ T.P.5 (Lch) or T.P.6 (Rch) ● Speaker Output Lch or Rch	Tape Speed Adjustment (Figure 13)	○ Adjust for 2,970 to 3,090Hz at T.P.5 (T.P.6). ● Adjust for 2,970 to 3,090Hz at Speaker Output Lch (Rch).

Note : ○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common.

Adjustment Locations

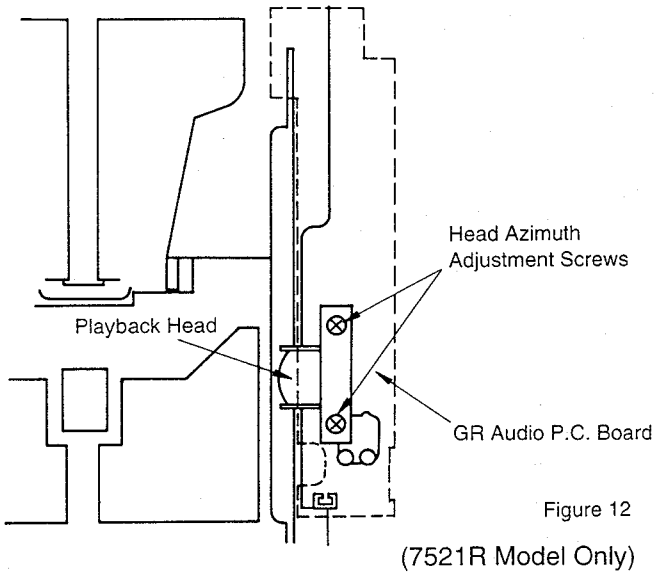


Figure 12

(7521R Model Only)

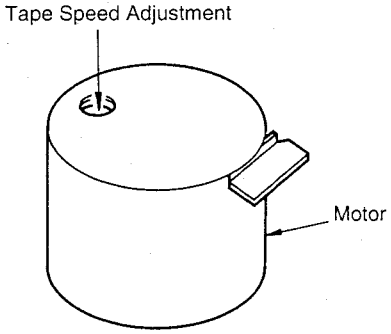


Figure 13

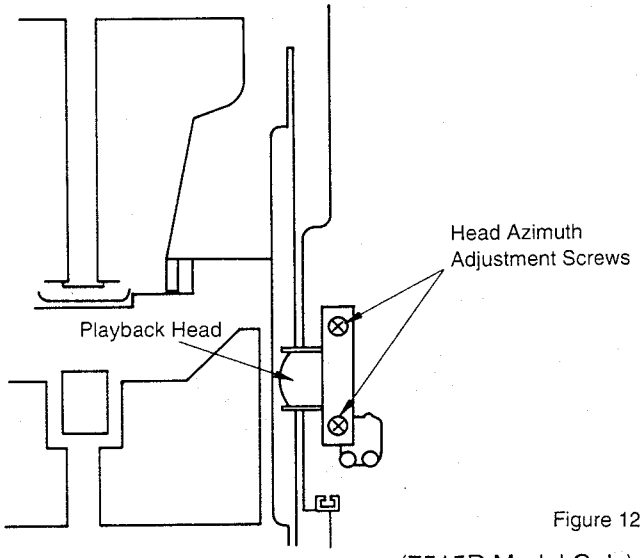
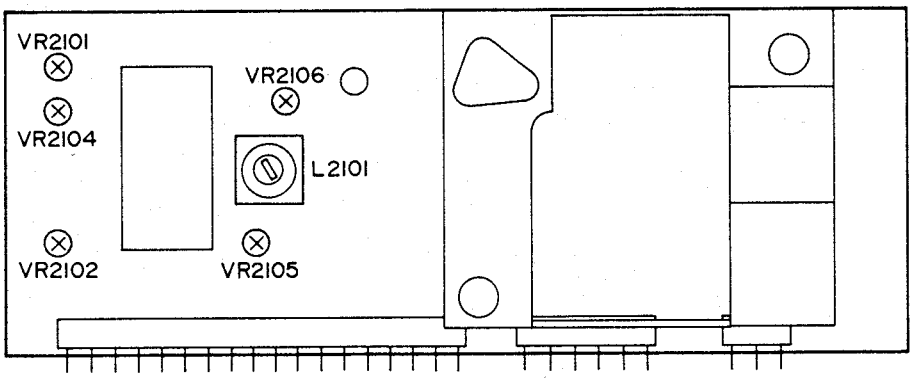
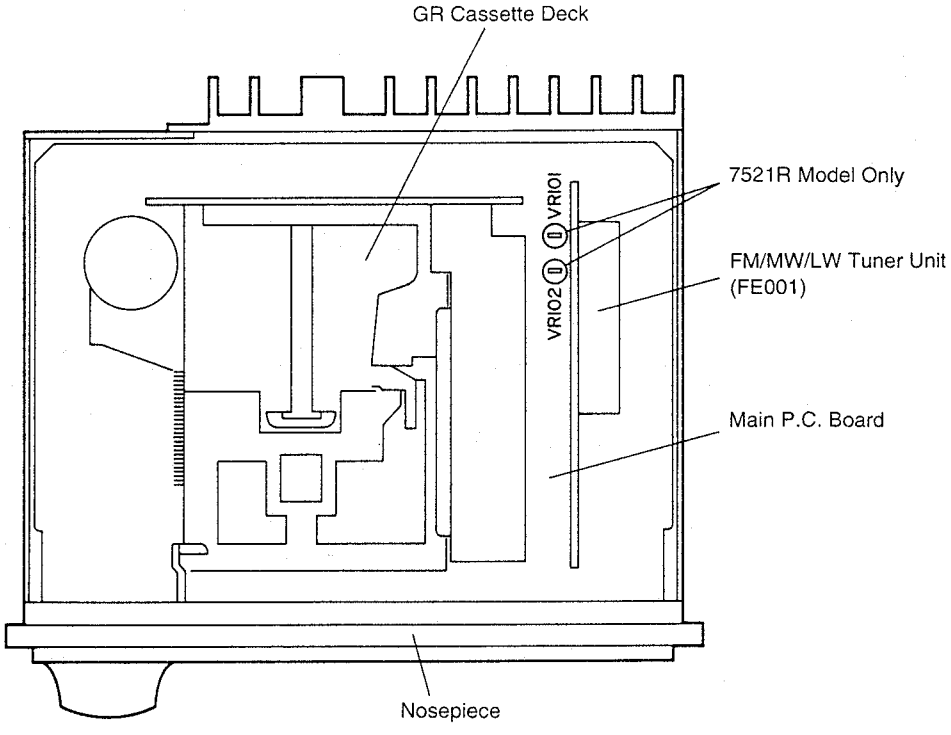


Figure 12

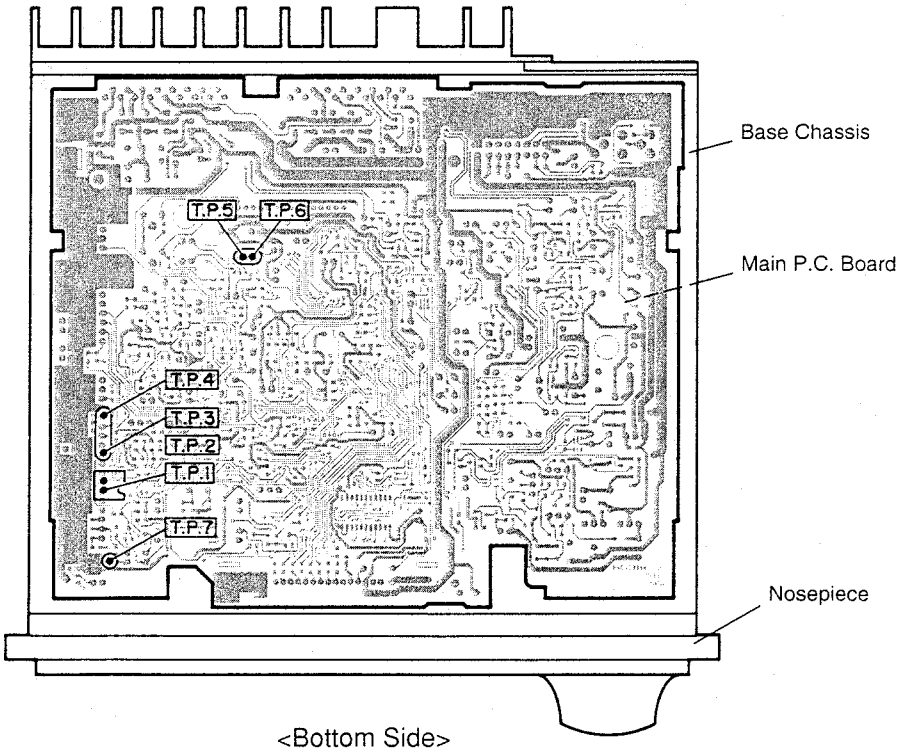
(7515R Model Only)



FM/MW/LW Tuner Unit (FE001)



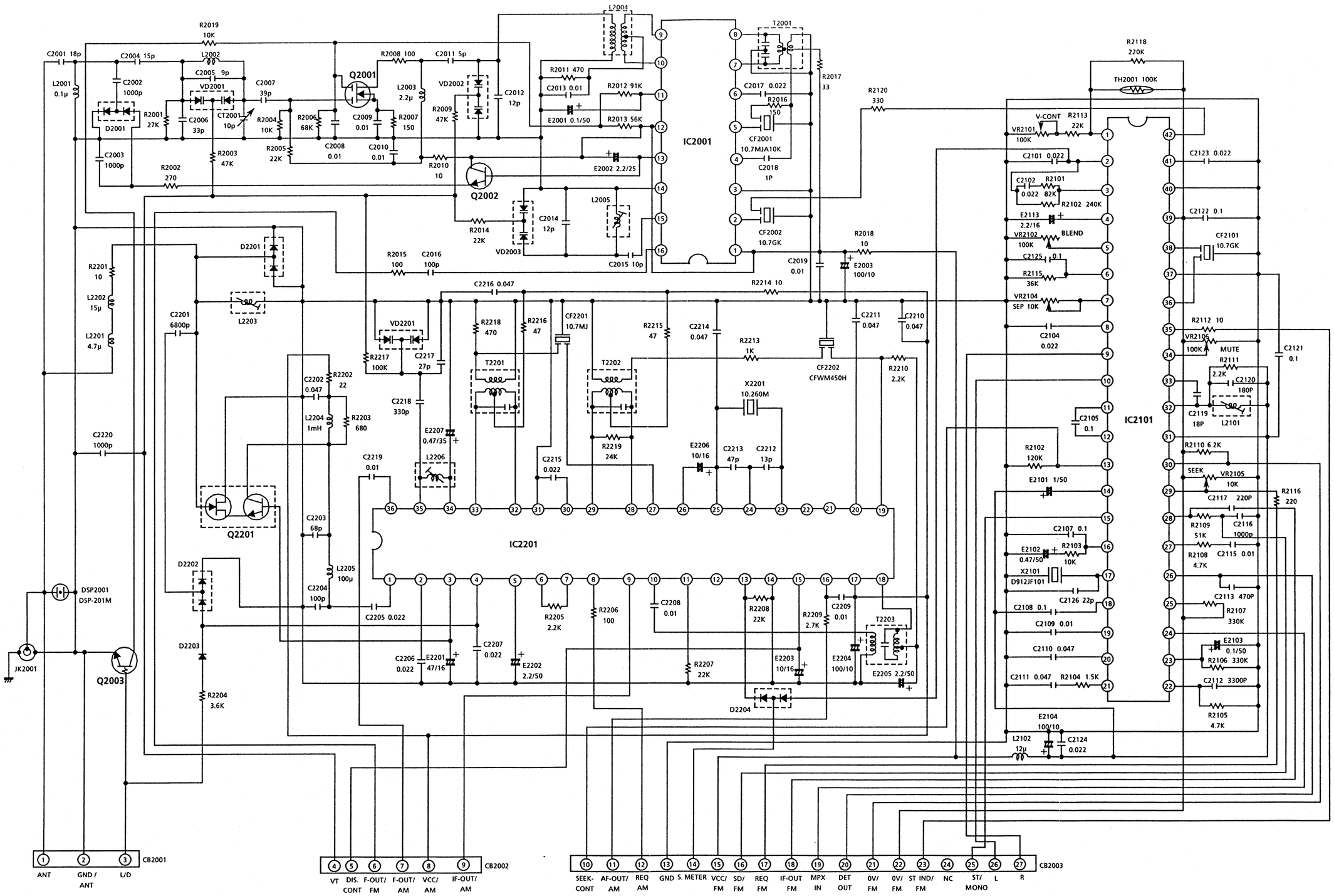
<Top Side>



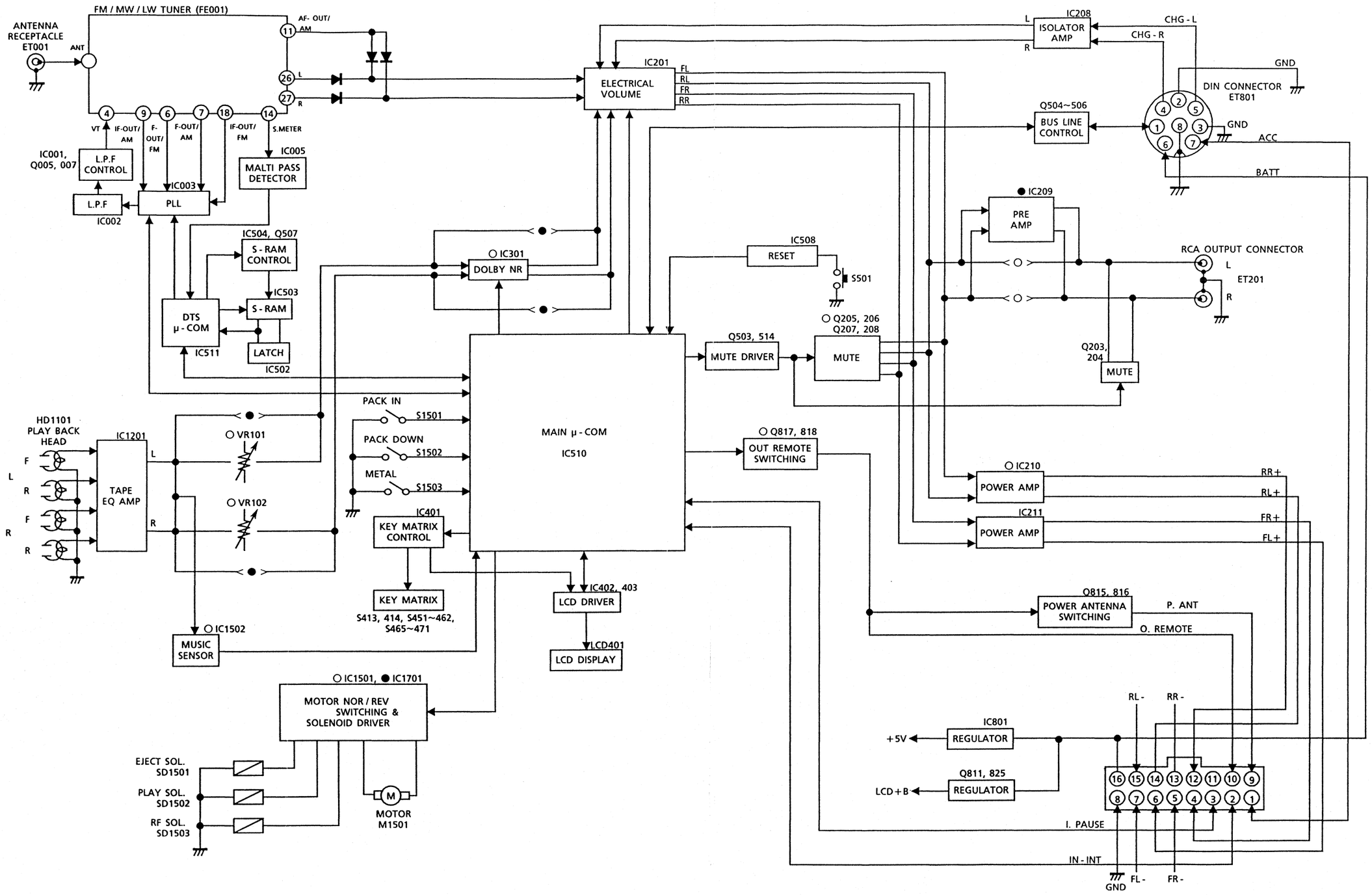
<Bottom Side>

Main P.C. Board (Foil Side)

Tuner S/D


IC2001
IC2101
IC2201
Q2001
Q2002
Q2003
Q2201
T2001
T2201
T2202
T2203
X2201 10.260M
X2101 D912JF101
CF2001 10.7MJA10K
CF2002 10.7GK
CF2101 10.7GK
CF2201 10.7MJ
CF2202 CFWM450H
D2001
D2201
D2202
D2203
D2204
VD2001
VD2002
VD2003
VD2201
L2001 0.1µ
L2002
L2003 2.2µ
L2004
L2005
L2201 4.7µ
L2202 15µ
L2203
L2204 1mH
L2205 100µ
L2206
TH2001 100K
VR2101 100K
VR2102 100K
VR2104 SEP 10K
VR2105 10K
VR2106 100K
CT2001 10p
DSP2001 DSP-201M
JK2001
R2001 27K
R2002 270
R2003 47K
R2004 10K
R2005 22K
R2006 68K
R2007 150
R2008 100
R2009 47K
R2010 10
R2011 470
R2012 91K
R2013 56K
R2014 22K
R2015 100
R2016 150
R2017 33
R2018 10
R2019 10K
R2101 82K
R2102 240K
R2107 330K
R2108 4.7K
R2109 51K
R2110 6.2K
R2111 2.2K
R2112 10
R2113 22K
R2115 36K
R2116 220
R2118 220K
R2120 330
R2201 10
R2202 22
R2203 680
R2204 3.6K
R2205 2.2K
R2206 100
R2207 22K
R2208 22K
R2209 2.7K
R2210 2.2K
R2214 10
R2215 47
R2216 47
R2217 100K
R2218 470
R2219 24K
C2001 18p
C2002 1000p
C2003 1000p
C2004 15p
C2005 9p
C2006 33p
C2007 39p
C2008 0.01
C2009 0.01
C2010 0.01
C2011 5p
C2012 12p
C2013 0.01
C2014 12p
C2015 10p
C2016 100p
C2017 0.022
C2018 1P
C2019 0.01
C2101 0.022
C2102 0.022
C2103 0.022
C2104 0.022
C2105 0.1
C2107 0.1
C2108 0.1
C2109 0.01
C2110 0.047
C2111 0.047
C2112 3300P
C2113 470P
C2115 0.01
C2116 1000p
C2117 220P
C2119 18P
C2120 180P
C2121 0.1
C2122 0.1
C2123 0.022
C2124 0.022
C2125 0.1
C2126 22p
C2201 6800p
C2202 0.047
C2203 68p
C2204 100p
C2205 0.022
C2206 0.022
C2207 0.022
C2208 0.01
C2209 0.01
C2210 0.047
C2211 0.047
C2212 13p
C2213 47p
C2214 0.047
C2215 0.022
C2216 0.047
C2217 27p
C2218 330p
C2219 0.01
C2220 1000p
E2001 0.1/50
E2002 2.2/25
E2003 100/10
E2101 1/50
E2102 0.47/50
E2103 0.1/50
E2104 100/10
E2113 2.2/16
E2201 47/16
E2202 2.2/50
E2203 10/16
E2204 100/10
E2205 2.2/50
E2206 10/16
E2207 0.47/35
CB2001
ANT
GND / ANT
L/D
CB2002
VT
DIS. CONT
F-OUT/ FM
F-OUT/ AM
VCC/ AM
IF-OUT/ AM
CB2003
SEEK-CONT
AF-OUT/ AM
REQ AM
GND
S. METER
VCC/ FM
SD/ FM
REQ FM
IF-OUT FM
MPX IN
DET OUT
0V/ FM
0V/ FM
ST IND/ FM
NC
ST/ MONO
L
R
V-CONT
BLEND
MUTE
SEEK

Block Diagram



Notes : ○ : 7521R Model Only,
● : 7515R Model Only, Others : Common.

7521R / 7515R	7521R / 7515R

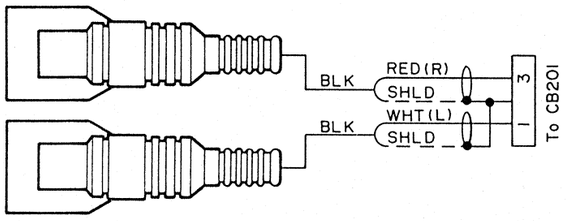
Parts Layout on P.C. Boards and Wiring Diagram (1/3)

MAIN P.C.BOARD (COMPONENT SIDE VIEW)

From GR CONTROL P.C.BOARD
(○ CBI501)
(● CBI701)

19 — 1 To CBI01

RCA OUTPUT CONNECTOR
(ET201)



Note: ○:7521R Model Only,
●:7515R Model Only,
Others:Common

From MAIN P.C.BOARD (FE001)

WHT(ANT.)

ANTENNA (E

To CB501

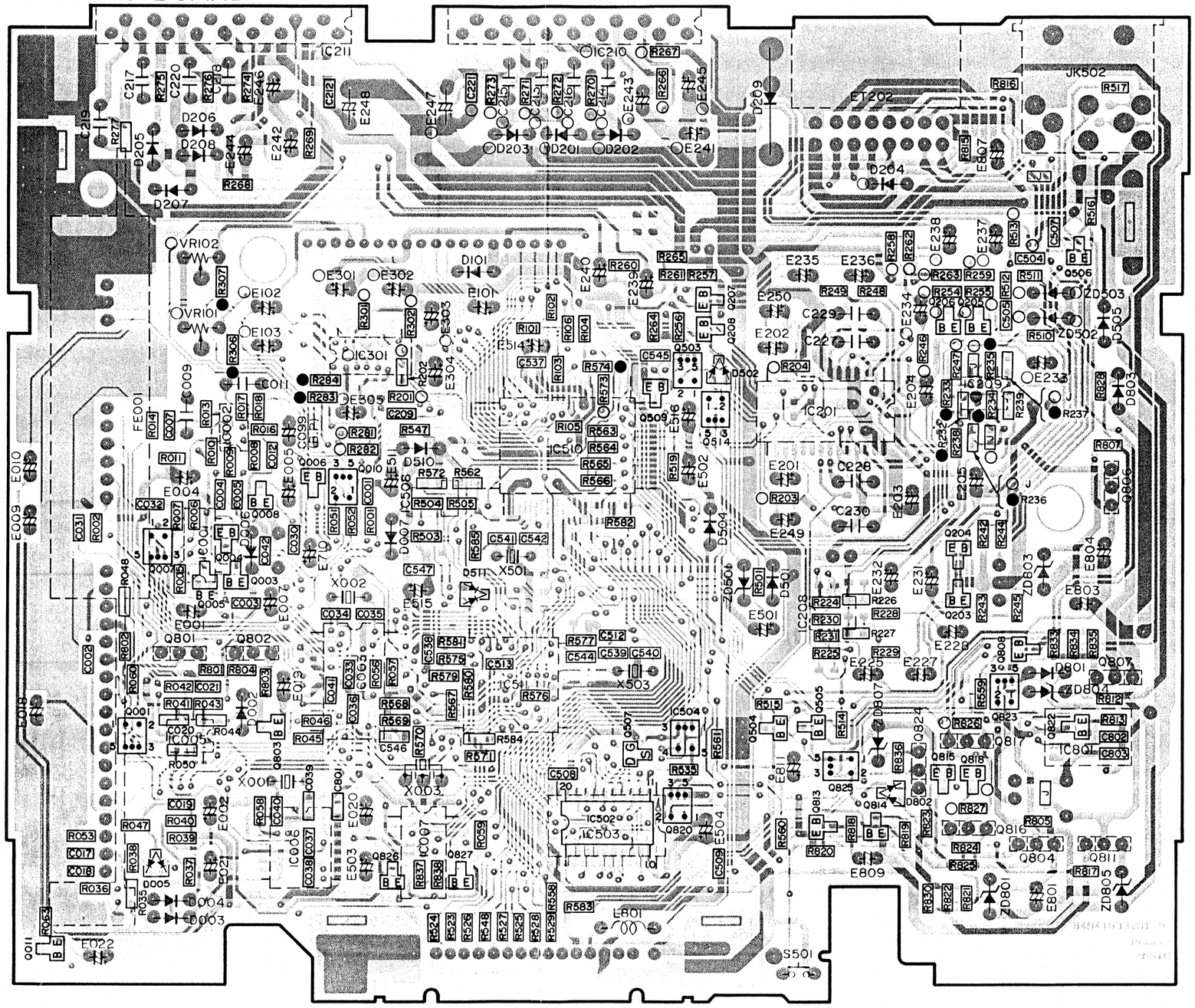
1 — 17

From FRONT P.C.BOARD
(CH401)

7521R / 7515R	7521R / 7515R

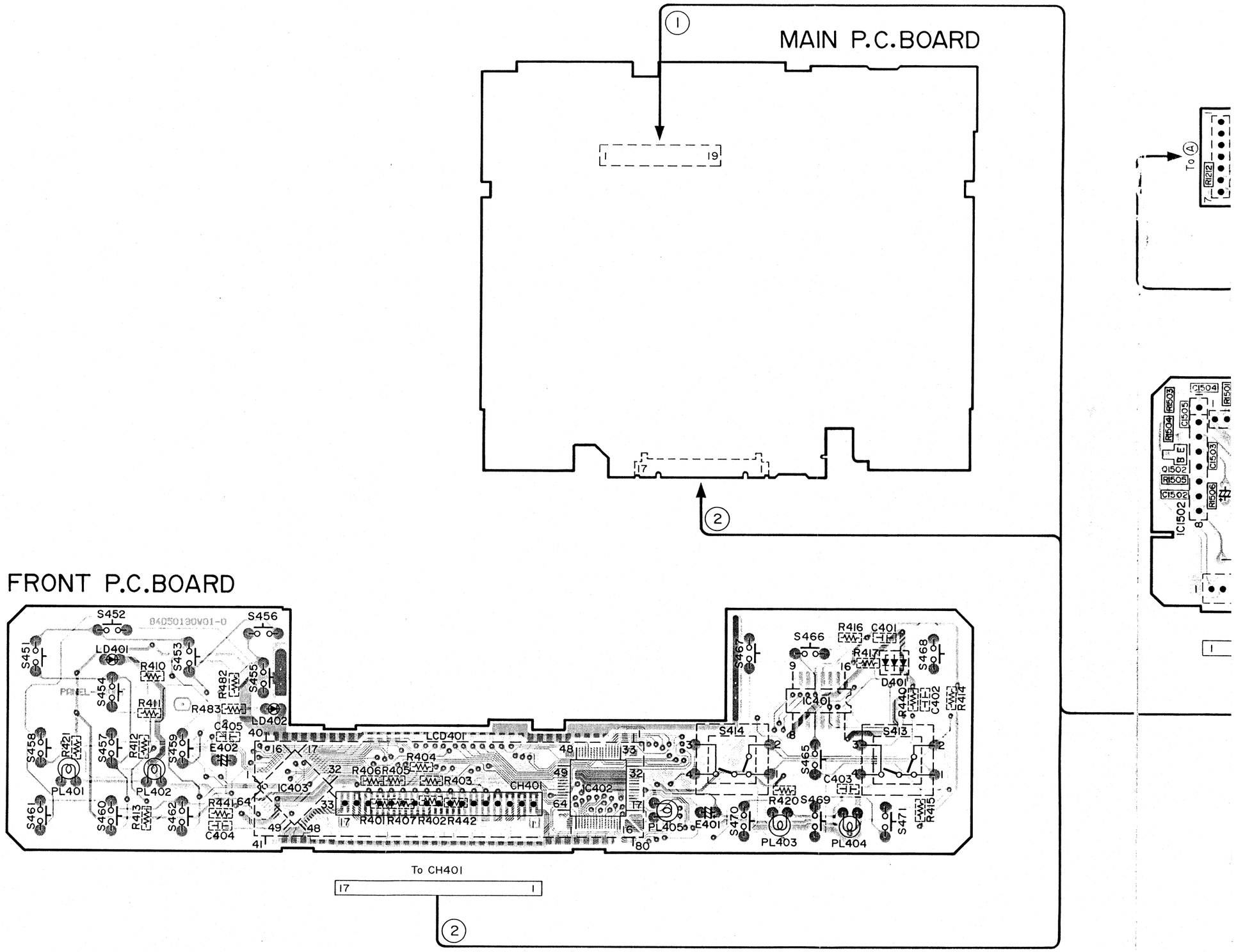
Orange Pattern: Component Side Pattern.
Blue Pattern: Foil Side Pattern.

MAIN P.C.BOARD (FOIL SIDE VIEW)



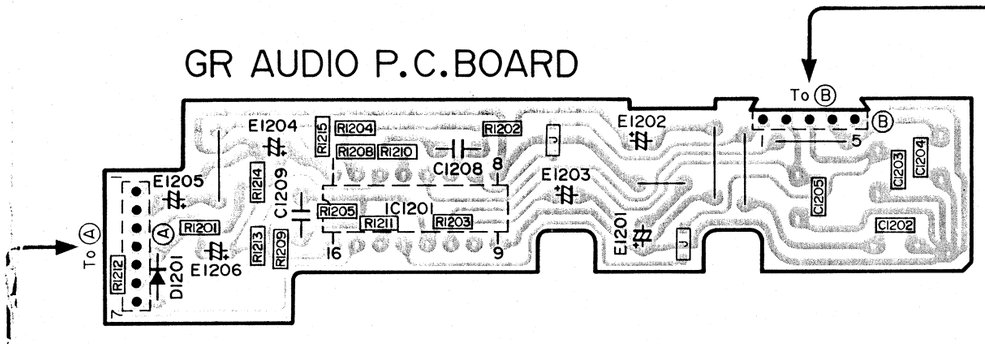
Parts Layout on P.C. Boards and Wiring Diagram (2/3) <7521R Model Only>

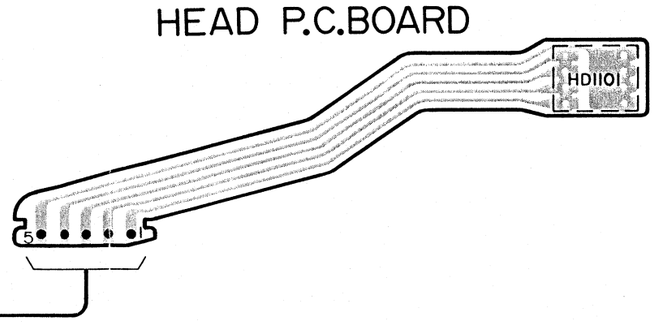
All P.C. Boards viewed from foil side.

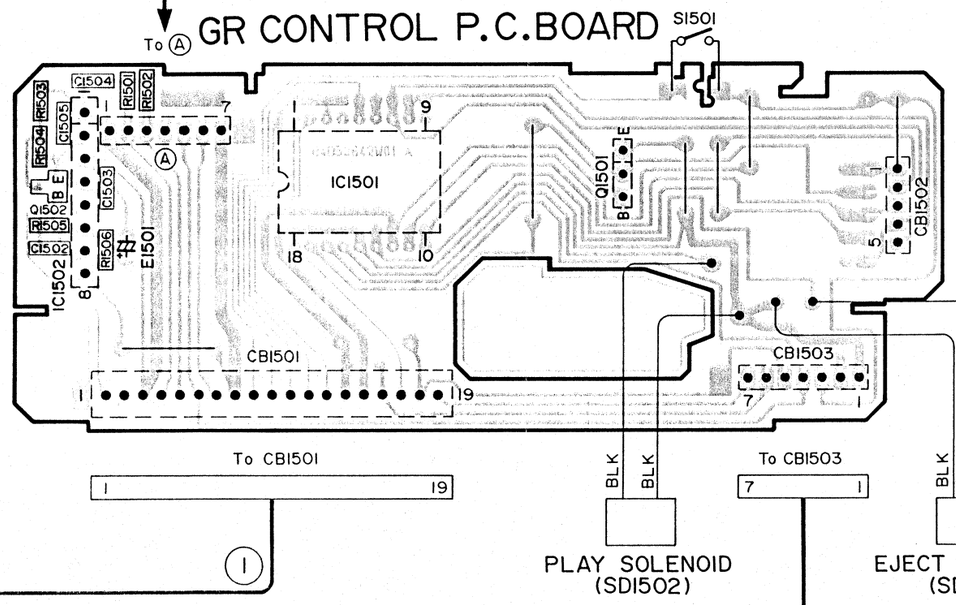


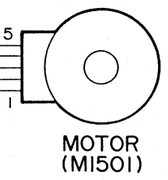
7521R / 7515R	7521R / 7515R

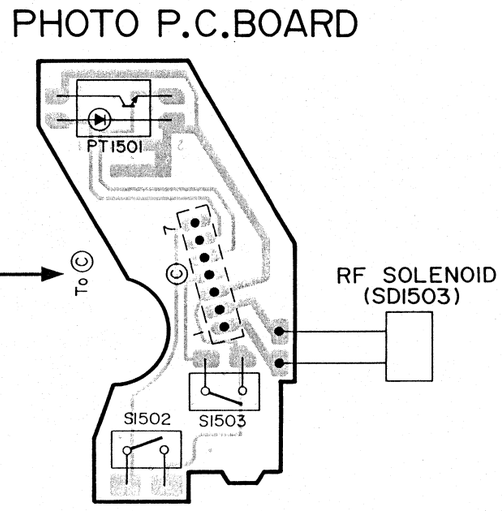
Orange Pattern: Component Side Pattern.
Blue Pattern: Foil Side Pattern.





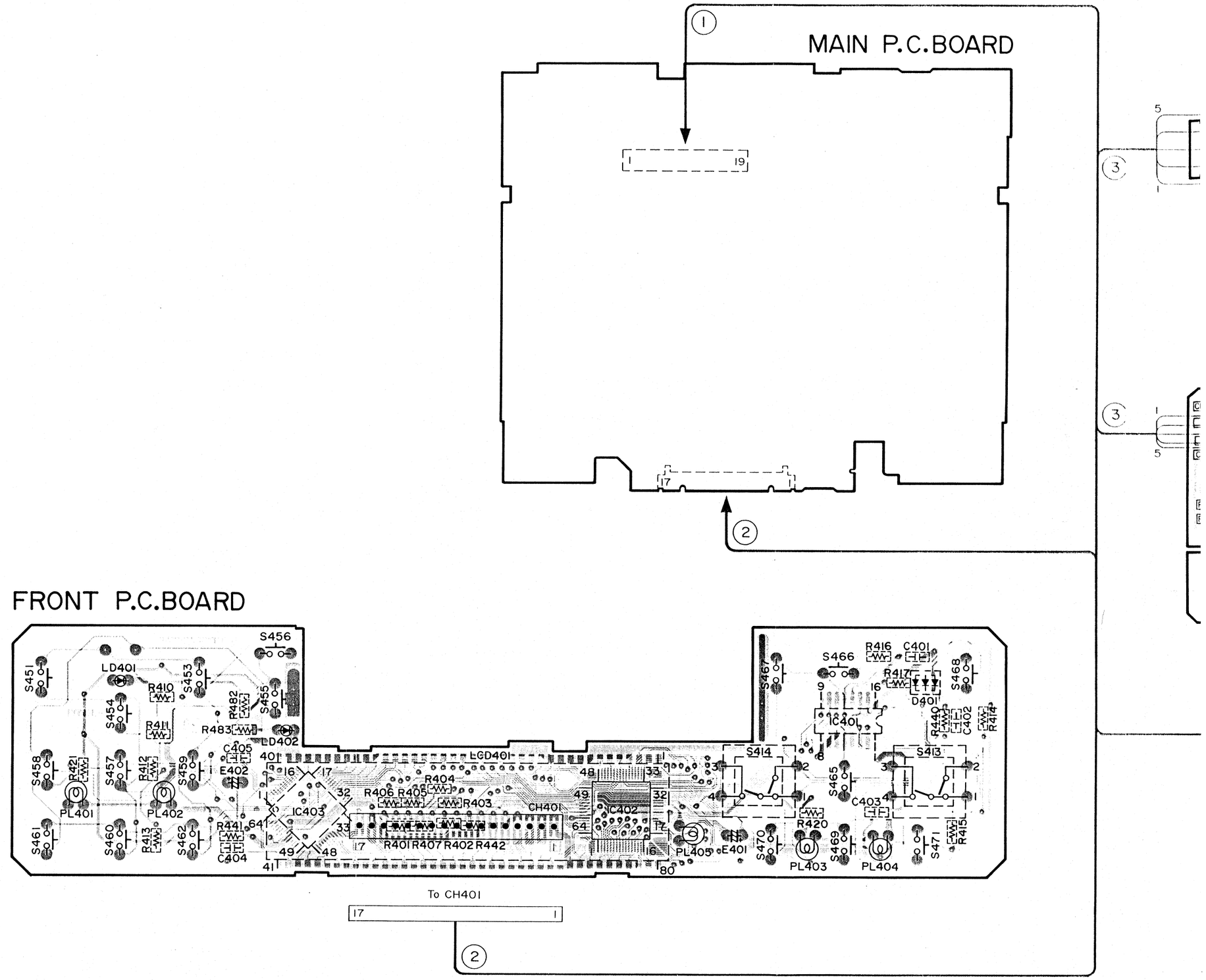






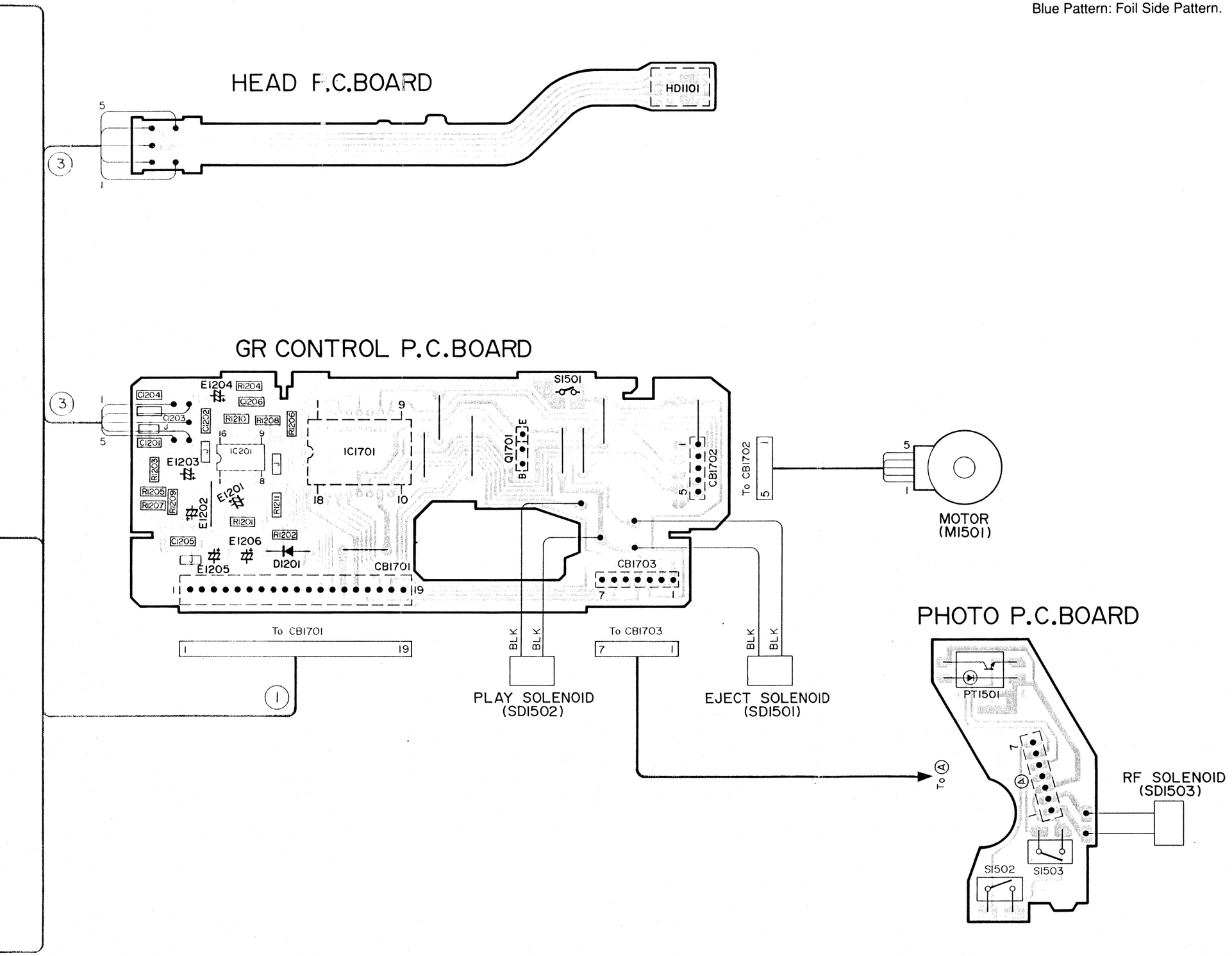
Parts Layout on P.C. Boards and Wiring Diagram (3/3) <7515R Model Only>

All P.C. Boards viewed from foil side.

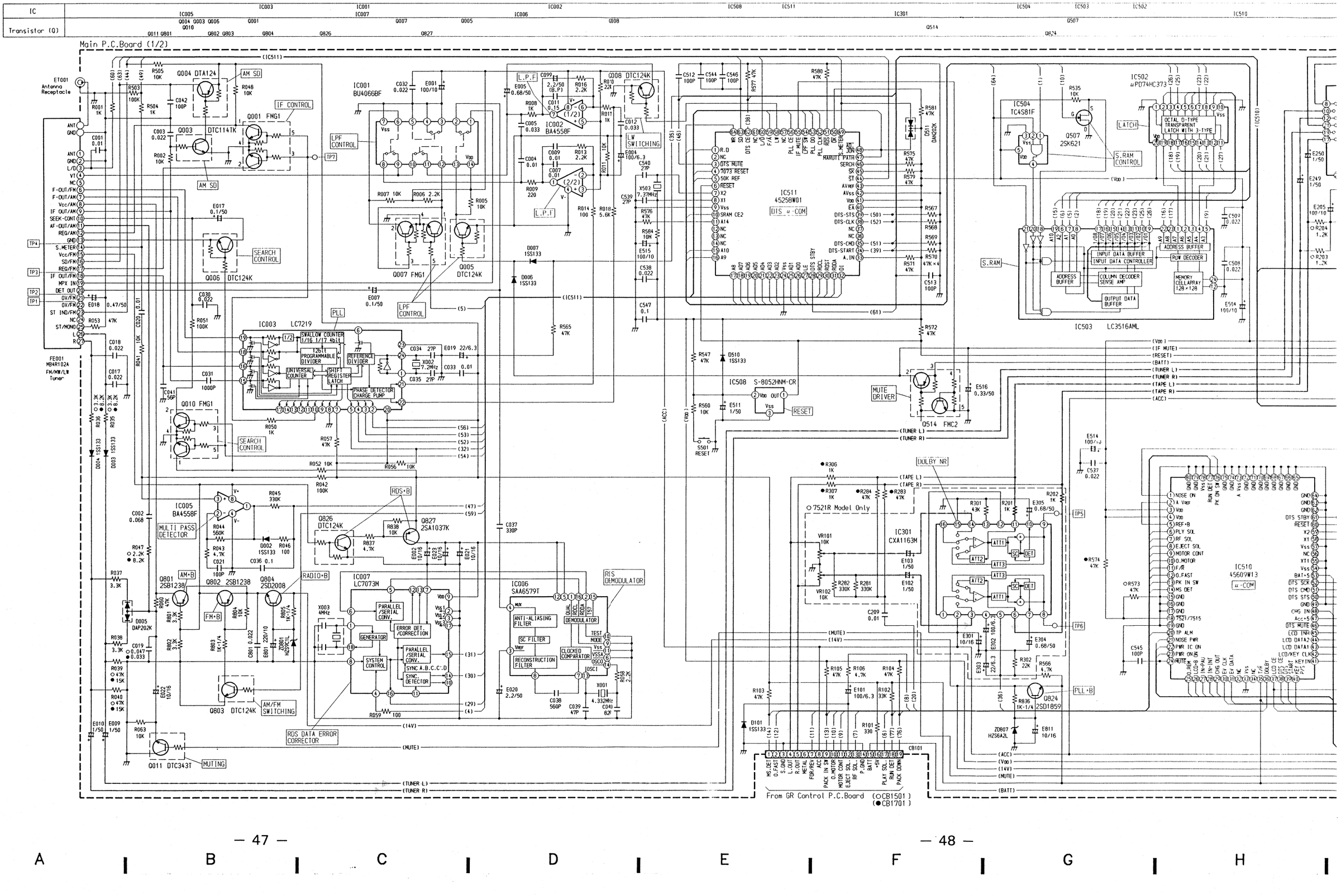


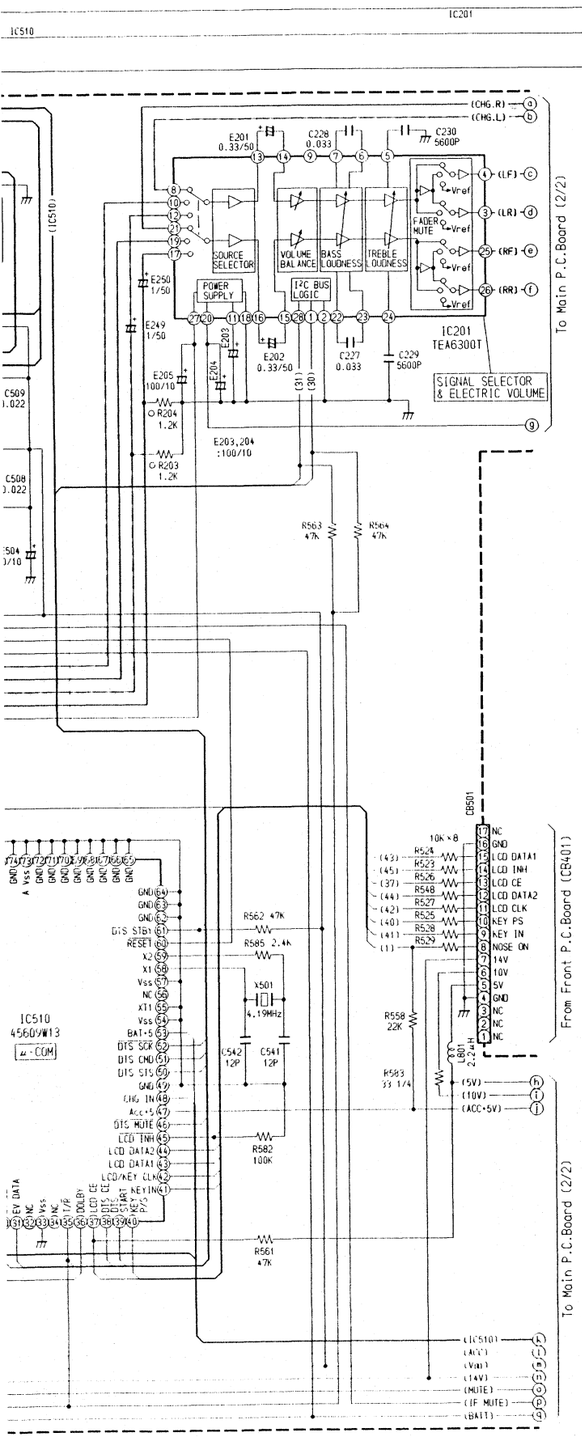
7521R / 7515R	7521R / 7515R

Orange Pattern: Component Side Pattern.
Blue Pattern: Foil Side Pattern.



Schematic Diagram (1/3)





IC001

1	2.5V	8	1.4V
2	2.5V	9	2.7V
3	0V	10	2.7V
4	0V	11	2.7V
5	0V	12	8.1V
6	0V	13	8.8V
7	0V	14	8.8V

IC002

1	8.4V
2	0.6V
3	2.7V
4	0V
5	2.7V
6	0V
7	6.7V
8	8.8V

IC003

1	2.3V	9	—	17	—
2	0V	10	5V	18	0V
3	0V	11	—	19	2.5V
4	0V	12	—	20	5V
5	5V	13	—	21	2.7V
6	—	14	—	22	0V
7	5V	15	0V	23	0V
8	0V	16	0V	24	2.5V

IC005 AM / FM

1	0.5V / 5V
2	0.4V / 5V
3	4.9V
4	0V
5	—
6	—
7	—
8	8.6V

IC006

1	—	9	0V
2	2.5V	10	0V
3	2.5V	11	0V
4	2.5V	12	5V
5	5V	13	2.1V
6	0V	14	2.5V
7	2.5V	15	—
8	2.5V	16	2.5V

IC007

1	2.2V	10	—
2	0V	11	—
3	0V	12	—
4	5V	13	—
5	2.5V	14	5V
6	2.5V	15	5V
7	0V	16	5V
8	0V	17	0V
9	5V	18	2.2V

IC201

1	5V	8	0V	15	4.4V	22	4.4V
2	0V	9	—	16	4.4V	23	4.4V
3	4.4V	10	2.2V	17	4.4V	24	0V
4	0V	11	0V	18	0V	25	0V
5	4.4V	12	4.4V	19	0V	26	4.4V
6	4.4V	13	4.4V	20	4.4V	27	8.9V
7	0V	14	4.4V	21	4.4V	28	5V

○ IC301

1	—		9	4.7V
2	9.1V		10	0.4V
3	4.6V		11	4.7V
4	4.6V		12	9.1V
5	4.2V / 0V	PB OFF / ON	13	1.3V
6	4.7V		14	4.6V
7	0.4V		15	0V
8	4.7V		16	—

IC502

1	0V	11	0V
2	0V	12	0V
3	0V	13	0V
4	0V	14	0V
5	4.9V	15	0V
6	0V	16	4.9V
7	0V	17	0V
8	0V	18	0V
9	0V	19	0V
10	0V	20	4.9V

IC503

1	0V	9	0V	17	0V
2	4.9V	10	0V	18	0V
3	0V	11	0V	19	4.9V
4	0V	12	0V	20	4.9V
5	0V	13	0V	21	4.9V
6	0V	14	0V	22	0V
7	4.9V	15	0V	23	4.9V
8	0V	16	0V	24	5V

IC504

1	4.9V
2	4.9V
3	0V
4	4.9V
5	4.9V

IC508

1	5V
2	4.8V
3	0V

IC510

1	4.3V / 2V	NOSE OFF / ON	17	0V		33	0V		49	0V		65	0V	
2	4.9V		18	4.9V		34	—		50	3V		66	0V	
3	4.9V		19	0V		35	4.9V / 0V	T / R	51	3.1V		67	0V	
4	4.9V		20	0V		36	4.1V / 0V	DOLBY OFF / ON	52	4.9V		68	0V	
5	4.9V		21	0V / 4.9V	NOSE NO / YES	37	2.8V		53	4.3V		69	0V	
6	4.9V / 0V	PLAY OFF / ON	22	0V / 4.9V	POW OFF / ON	38	4.9V		54	0V		70	0V	
7	0V / 4.9V	FF / REW	23	0V / 4.9V	POW OFF / ON	39	0.2V		55	0V		71	0V	
8	0V / 4.9V	EJECT OFF / ON	24	0V / 4.9V	MUTE OFF / ON	40	0V		56	—		72	0V	
9	4.9V / 0V	N / R	25	4.9V		41	2.9V		57	0V		73	0V	
10	4.9V / 0V	T / R	26	4.9V		42	0.4V		58	2.5V		74	V0	
11	4.9V / 0V	F / R	27	0V / 4.9V	I-PAU OFF / ON	43	2.8V		59	2.6V		75	0V	
12	0V / 4.9V	PLY / FF. REW	28	0V / 4.9V	I-INT OFF / ON	44	0.3V		60	4.9V / 0V	RESET OFF / ON	76	0V / 4.9V	PACK OUT / IN
13	0V / 4.9V	PACK OUT / IN	29	0V / 4.9V	CHG OFF / ON	45	4.9V		61	0V		77	PS	
14	4.9V / 0V	MS. OFF / ON	30	0V / 4.9V	CLK OFF / ON	46	4.9V		62	0V		78	0V	
15	0V		31	4.9V		47	4.3V		63	0V		79	0V	
16	0V		32	—		48	0V / 4.8V	CHG OFF / ON	64	0V		80	0V	

IC511

1	4.9V		17	0.8V	33	4.9V	49	0.3V	
2	—		18	0.8V	34	0.2V	50	4.9V	
3	4.9V		19	0.8V	35	0V	51	0V	
4	4.9V		20	0.8V	36	—	52	0V	
5	0V		21	0.8V	37	—	53	0V	
6	4.9V / 0V	RESET OFF / ON	22	0.8V	38	4.9V	54	4.9V	
7	4.9V / 2.3V	XTL OFF / ON	23	0.8V	39	3V	55	0V	
8	0V / 2.1V	XTL OFF / ON	24	0.85V	40	4.9V	56	0V	
9	0V		25	0.5V	41	4.9V	57	0V	
10	4.9V		26	0.5V	42	0V	58	0V / 4.9V	LW OFF / ON
11	0.9V		27	0V	43	4.9V	59	4.9V / 0V	FM / AM
12	—		28	0V	44	5V	60	0V	
13	—		29	4.9V	45	4.9V	61	—	
14	—		30	4.9V	46	4.9V	62	4.9V	
15	0.9V		31	4.9V	47	4V	63	0V	
16	0.7V		32	5V	48	4V	64	4.9V	

	1	2	3	4	5
Q001	0V	0V	4.5V	0V	4.5V
Q007	0V	8.1V	0V	0V	8.1V
Q010	2.8V	0V	5V	0V	0V
Q514	0V	13.8V	0V	0V	13.8V

	E	C	B	
Q003	0V	4.9V	0V	
Q004	5V	0V	4.9V	
Q005	0V	8.8V	0V	
Q006	0V	0V	4.9V	
Q008	0V	2.5V / 0V	0V / 4.9V	LW OFF / ON
Q011	0V	0V	2.3V	
Q507	0V	0V	4.9V	
Q801	8.5V	0V / 8.6V	8.5V / 7.8V	AM OFF / ON
Q802	8.5V	8.5V / 0.85V	7.8V / 8.5V	FM OFF / ON
Q803	0V	0V / 8.53V	4.9V / 0V	FM / AM
Q804	8.7V	14V	9.2V	
Q824	5V	14V	5.6V	
Q826	0V	0V / 5V	0V / 8.5V	RDS OFF / ON
Q827	5V	2.7V / 4.9V	5V / 4.3V	RDS OFF / ON

Measuring Conditions

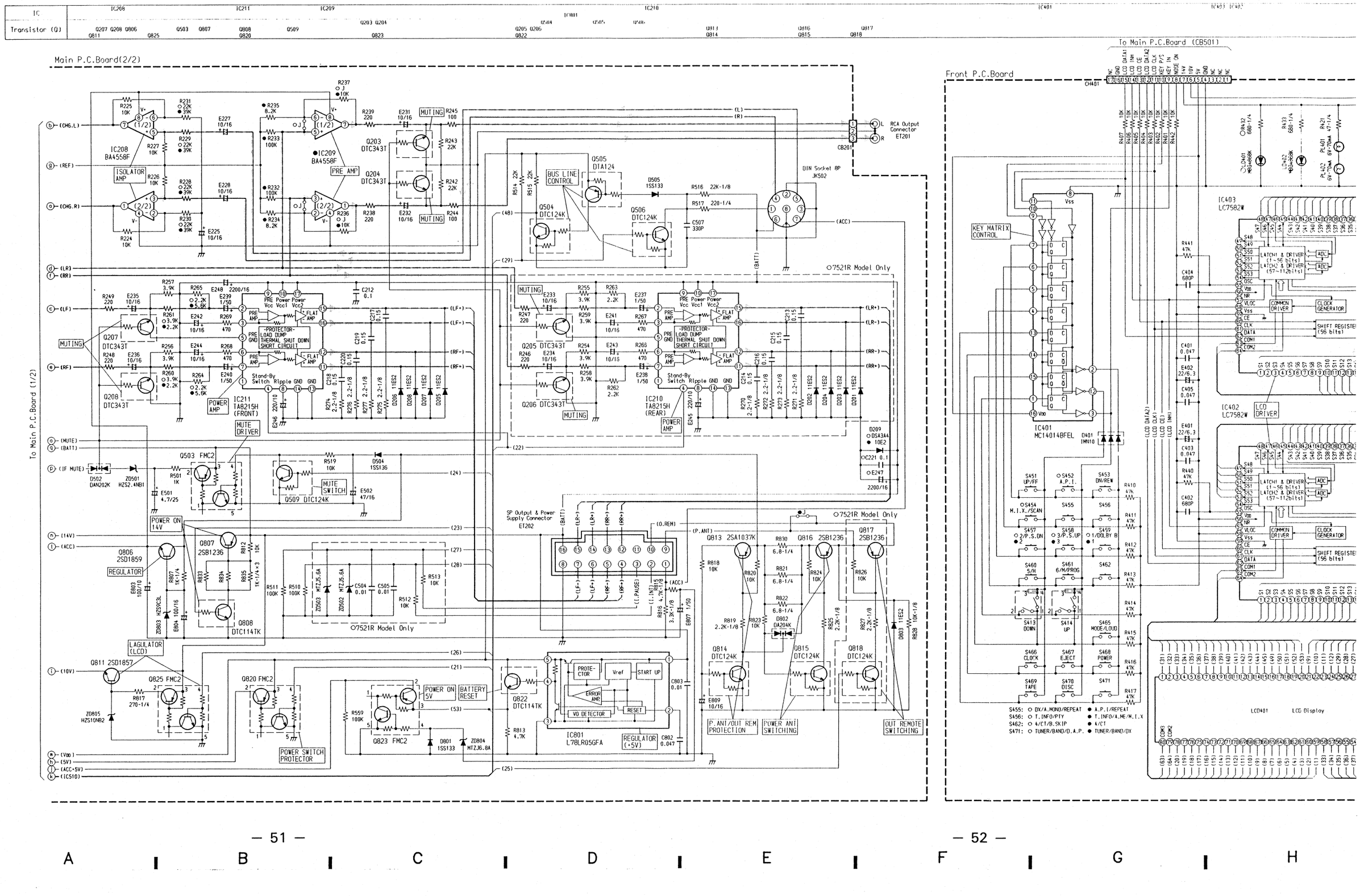
1. Power Supply Voltage : DC14.4V
2. Measuring Meter : Digital Multi Meter
3. Measuring Reference Point : Between Ground
4. Measuring Condition : No Signal Input
   - FM 98.1MHz
   - MW 999kHz
   - LW 216kHz
   - TAPE ..... Blank

Note : ○: For 7521R Model only, ●: For 7515R Model only, Others : Common.

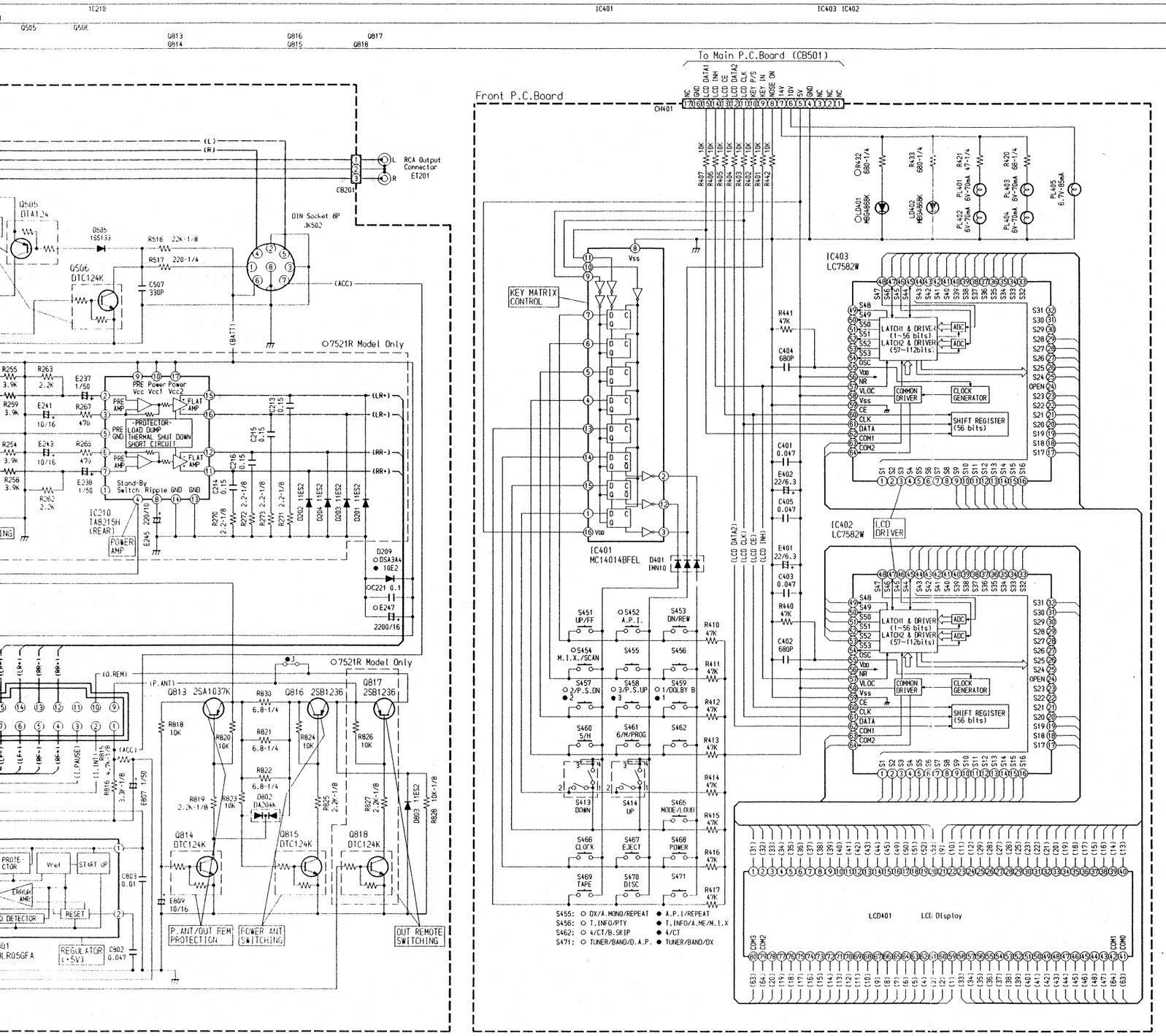
NOTES :

1. All resistance values are in ohms. K=1,000 M=1,000,000
2. All capacitance values are in microfarads. $P=\frac{1}{1,000,000}$

Schematic Diagram (2/3)



7521R / 7515R



IC208

1	4.4V
2	4.4V
3	4.4V
4	0V
5	4.4V
6	4.4V
7	4.4V
8	8.8V

● IC209

1	4.7V
2	4.7V
3	4.6V
4	0V
5	4.6V
6	4.7V
7	4.7V
8	8.8V

○ IC210 IC211

1	—	10	14V
2	4.6V	11	5.8V
3	4.7V	12	5.8V
4	4.9V	13	0V
5	0V	14	0V
6	4.7V	15	5.8V
7	4.1V	16	5.8V
8	4.7V	17	14V
9	14V		

IC401

1	4.7V	9	0V
2	4.7V	10	0.4V
3	4.7V	11	4.9V
4	4.7V	12	4.7V
5	4.7V	13	4.7V
6	4.7V	14	4.7V
7	4.7V	15	4.7V
8	0V	16	4.7V

IC402

1	PS	17	PS	33	PS	49	PS
2	PS	18	PS	34	PS	50	PS
3	PS	19	PS	35	PS	51	PS
4	PS	20	PS	36	PS	52	PS
5	PS	21	—	37	PS	53	PS
6	PS	22	—	38	PS	54	—
7	PS	23	—	39	PS	55	PS
8	PS	24	—	40	PS	56	5V
9	PS	25	—	41	PS	57	PS
10	PS	26	—	42	PS	58	5V
11	PS	27	—	43	PS	59	0V
12	PS	28	—	44	PS	60	PS
13	PS	29	—	45	PS	61	PS
14	PS	30	—	46	—	62	PS
15	PS	31	PS	47	—	63	PS
16	PS	32	PS	48	—	64	PS

IC403

1	—	17	PS	33	PS	49	—
2	—	18	PS	34	PS	50	—
3	—	19	PS	35	PS	51	—
4	—	20	PS	36	PS	52	—
5	—	21	PS	37	PS	53	—
6	—	22	PS	38	PS	54	—
7	—	23	PS	39	PS	55	PS
8	—	24	—	40	PS	56	5V
9	PS	25	PS	41	PS	57	PS
10	PS	26	PS	42	PS	58	5V
11	PS	27	PS	43	PS	59	0V
12	PS	28	PS	44	PS	60	PS
13	PS	29	PS	45	PS	61	PS
14	PS	30	—	46	PS	62	PS
15	PS	31	—	47	PS	63	PS
16	PS	32	—	48	PS	64	PS

IC801

1	14V
2	6V
3	0V
4	5V
5	5V

	1	2	3	4	5
Q503	0.1V	13.8V	0V	0V	14V
Q820	4.9V	0V	0V	4.9V	4.9V
Q823	4.3V	0V	0V	6.3V	4.3V
Q825	14V	0V	0V	4.9V	14V

		E	C	B				E	C	B	
	Q203	0V	0V	2.36V			Q807	14V	14V	13.3V	
	Q204	0V	0V	2.3V			Q808	0V	14V / 0.1V	0V / 4.9V	POW OFF / ON
○	Q205	0V	0V	2.3V			Q811	9.5V	14V	10V	
○	Q206	0V	0V	2.3V			Q813	14V	0V	14V	
•	Q207	0V	0V	2.37V			Q814	0V	14V	0V	
	Q208	0V	0V	2.37V			Q815	0V	0V	9.6V	
	Q504	0V	4.9V	0V			Q816	14V	14V	13.3V	
	Q505	4.9V	0V	4.9V		○	Q817	13.7V	13.7V	13V	
	Q506	0V	14V	0V		○	Q818	0V	0.5V	0V	
	Q509	0V	9.5V	0V			Q822	4.3V	5V	5V	
	Q806	8.9V	14V	9.5V							

Measuring Conditions

1. Power Supply Voltage : DC14.4V
2. Measuring Meter : Digital Multi Meter
3. Measuring Reference Point : Between Ground
4. Measuring Condition : No Signal Input
   - FM 98.1MHz
   - MW 999kHz
   - LW 216kHz
   - TAPE ..... Blank

Note : ○ : For 7521R Model only, ● : For 7515R Model only, Others : Common.

NOTES :

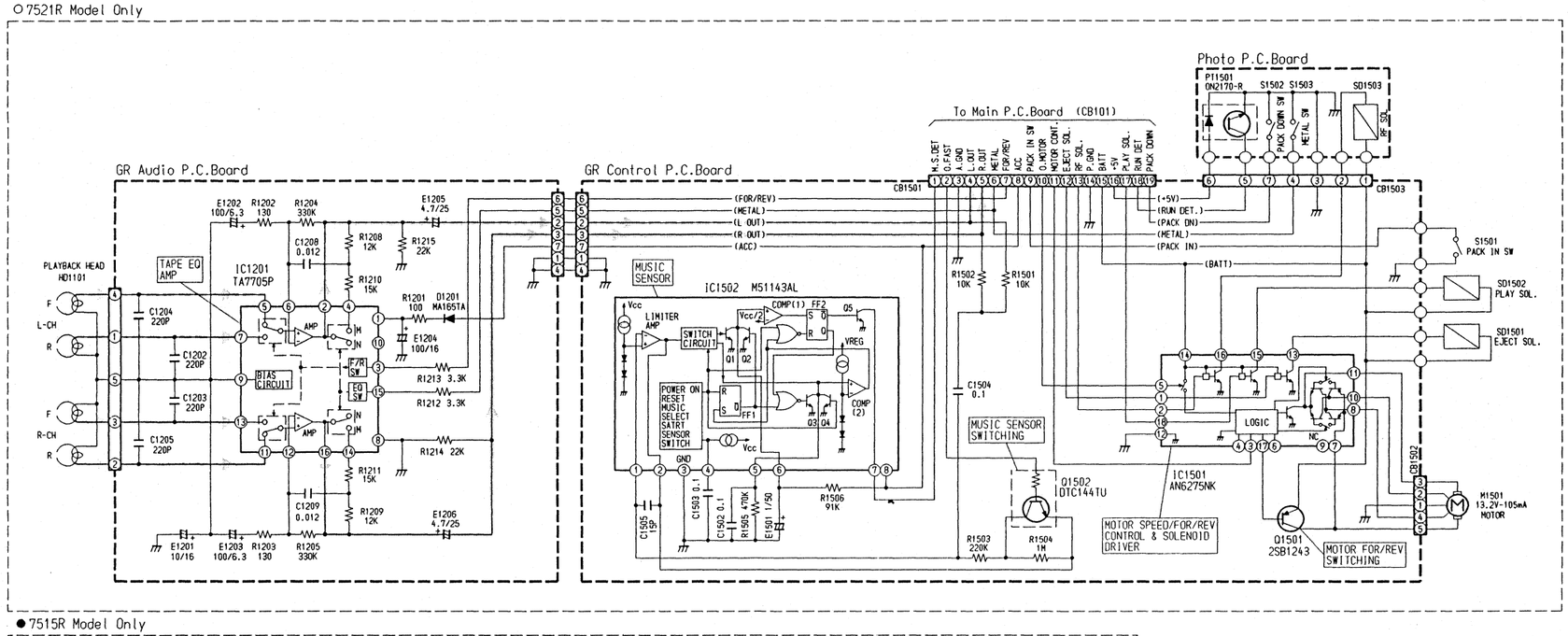
1. All resistance values are in ohms. K=1,000 M=1,000,000
2. All capacitance values are in microfarads. $P=\frac{1}{1,000,000}$

7521R / 7515R

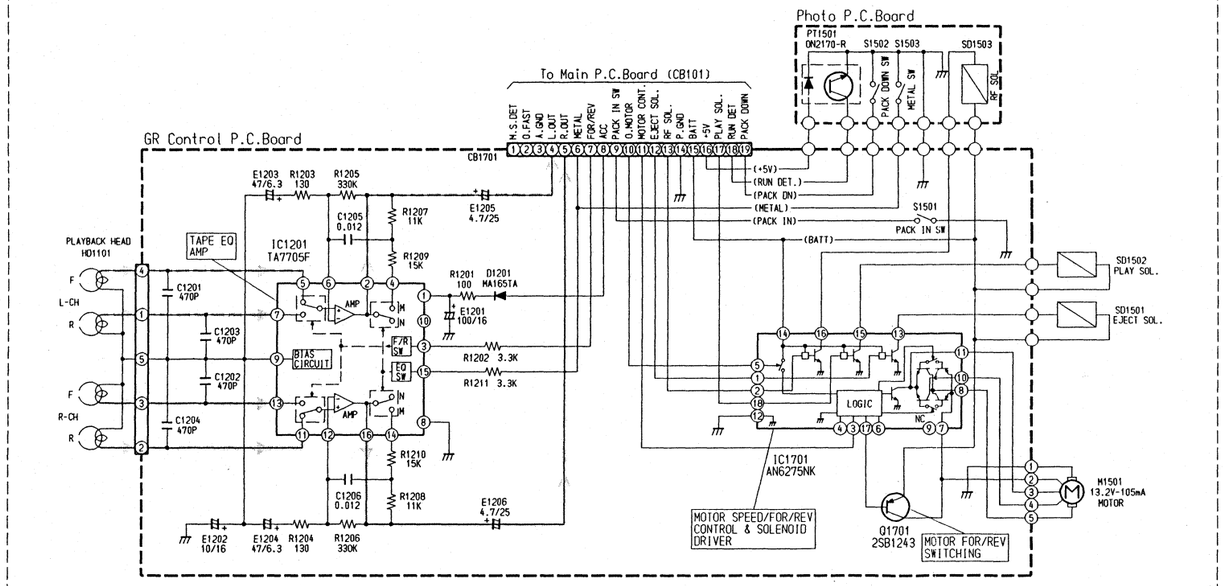
Schematic Diagram (3/3)

IC	IC1201	IC1502	IC1501
Transistor (Q,PT)	IC1201 IC1701 Q1502 PT1501 Q1501 PT1501 Q1701		

○7521R Model Only



●7515R Model Only



○ IC1201

1	13.1V	9	2.9V
2	3.1V	10	—
3	4.9V	11	2.9V
4	3.1V	12	2.9V
5	2.9V	13	2.9V
6	2.9V	14	3.1V
7	2.9V	15	0.1V
8	0V	16	3.1V

● IC1201

1	10.8V	9	2.9V
2	3V	10	—
3	5.1V	11	2.9V
4	3V	12	2.9V
5	2.9V	13	2.9V
6	2.9V	14	3V
7	2.9V	15	0V
8	0V	16	3V

○ IC1501

1	0V	10	13.9V
2	0V	11	8.1V
3	5.1V	12	0V
4	—	13	14V
5	5.1V	14	14V
6	—	15	0.2V
7	13.9V	16	14V
8	8.2V	17	13.2V
9	—	18	5.1V

○ IC1502

1	1.41V
2	1.38V
3	0V
4	1.31V
5	0.02V
6	0.02V
7	0.05V
8	14.01V

● IC1701

1	0V	10	11.9V
2	0V	11	5.7V
3	5.1V	12	0V
4	—	13	12V
5	5.1V	14	12V
6	—	15	0.2V
7	11.9V	16	12V
8	5.7V	17	11.3V
9	—	18	5.1V

	E	C	B
○ Q1501	14V	13.8V	13.6V
○ Q1502	0V	0.4V	3.8V
● Q1701	12V	11.9V	11.3V

Measuring Conditions

1. Power Supply Voltage : DC14.4V
2. Measuring Meter : Digital Multi Meter
3. Measuring Reference Point : Between Ground
4. Measuring Condition : No Signal Input
   FM 98.1MHz
   MW 999kHz
   LW 216kHz
   TAPE ..... Blank

Note : ○ : For 7521R Model only, ● : For 7515R Model only, Others : Common.

NOTES :

1. All resistance values are in ohms. K=1,000 M=1,000,000
2. All capacitance values are in microfarads. $P=\frac{1}{1,000,000}$

I J K L

Electrical Parts List

Resistor : Carbon resistors under 1 / 4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor : μF=microfarads, pF=picofarads

Abbreviations

RES.=	Resistor	CAP.=	Capacitor
C.F.=	Carbon Film	ELY.=	Electrolytic
M.F.=	Metal Film	CER.=	Ceramic
M.O.=	Metal Oxide Film	MYL.=	Mylar
M.P.=	Metal Plate	TAN.=	Tantalum
TR.=	Transistor	POLY.=	Polystyrol
TRANS.=	Transformer	PP.=	Polypropylene
CP.=	Chip	PLT.=	Polyethylene
		PF.=	Polyester Film

Main P. C. Board

IC's

	Symbol No.	Part No.	Description
	IC001	51T68999F13	BU4066BF
	or	51T68999F23	XRU4066BF
	IC002	51T65379F12	BA4558F
	or	51T65379F22	XRA4558F
	IC003	51T35504W02	LC7219
	IC005	51T65379F12	BA4558F
	or	51T65379F22	XRA4558F
	IC006	51T55054W02	SAA6579T
	IC007	51T35503W02	LC7073M
	IC201	51T83607F05	TEA6300T
	IC208	51T65379F12	BA4558F
	or	51T65379F22	XRA4558F
●	IC209	51T65379F12	BA4558F
●	or	51T65379F22	XRA4558F
●	or	51T15001W11	BA4560
○	IC210	51T35133W02	TA8215H
	IC211	51T35133W02	TA8215H
○	IC301	51T16466W02	CXA1163M
	IC502	51T35086W02	μPD74HC373
	IC503	51T84723F02	LC3516AML
	IC504	51T93532F04	TC4S81F
	IC508	51T95014F13	S-8052HNM-CR
	IC510	51T45609W13	45609W13
	IC511	51T45258W01	45258W01
	IC801	51T15268W06	L78LR05GFA

Transistors

	Symbol No.	Part No.	Description
	Q001	48T73888F08	CP., FMG1
	Q003	48T62967F09	CP., DTC114TK
	Q004	48T62966F03	CP., DTA124
	Q005	48T62967F03	CP., DTC124K
	Q006	48T62967F03	CP., DTC124K
	Q007	48T73888F08	CP., FMG1
	Q008	48T62967F03	CP., DTC124K
	Q010	48T73888F08	CP., FMG1
	Q011	48T62967F33	CP., DTC343T
	Q203	48T62967F33	CP., DTC343T
	Q204	48T62967F33	CP., DTC343T
○	Q205	48T62967F33	CP., DTC343T
○	Q206	48T62967F33	CP., DTC343T
	Q207	48T62967F33	CP., DTC343T
	Q208	48T62967F33	CP., DTC343T
	Q503	48T73888F12	CP., FMC2
	Q504	48T62967F03	CP., DTC124K
	Q505	48T62966F03	CP., DTA124
	Q506	48T62967F03	CP., DTC124K
	Q507	48T80674F01	FET, 2SK621
	Q509	48T62967F03	CP., DTC124K
	Q514	48T73888F12	CP., FMC2
	Q801	48T84234F03	2SB1238
	Q802	48T84234F03	2SB1238
	Q803	48T62967F03	CP., DTC124K
	Q804	48T15289W03	2SD2008
	Q806	48T83835F03	2SD1859
	Q807	48T55058W01	2SB1236
	Q808	48T62967F09	CP., DTC114TK
	Q811	48T55057W01	2SD1857
	Q813	48T63420F01	CP., 2SA1037K
	Q814	48T62967F03	CP., DTC124K
	Q815	48T62967F03	CP., DTC124K
	Q816	48T55058W01	2SB1236
○	Q817	48T55058W01	2SB1236
○	Q818	48T62967F03	CP., DTC124K
	Q820	48T73888F12	CP., FMC2
	Q822	48T62967F09	CP., DTC114TK
	Q823	48T73888F12	CP., FMC2
	Q824	48T83835F03	2SD1859
	Q825	48T73888F12	CP., FMC2
	Q826	48T62967F03	CP., DTC124K
	Q827	48T63420F01	CP., 2SA1037K

Diodes

	Symbol No.	Part No.	Description
	D002	48T68828F01	1SS133
	D003	48T68828F01	1SS133
	D004	48T68828F01	1SS133
	D005	48T63463F01	CP., DAP202K
	D006	48T68828F01	1SS133
	D007	48T68828F01	1SS133
	D101	48T68828F01	1SS133

Note : ○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common.

Symbol No.		Part No.	Description
○	D201	48T84052F01	11ES2
○	D202	48T84052F01	11ES2
○	D203	48T84052F01	11ES2
○	D204	48T84052F01	11ES2
	D205	48T84052F01	11ES2
	D206	48T84052F01	11ES2
	D207	48T84052F01	11ES2
	D208	48T84052F01	11ES2
○	D209	48T68580F03	DSA3A4
●	D209	48T81044F01	10E2
	D502	48T63462F01	CP., DAN202K
	D504	48T70933F01	1SS136
	D505	48T68828F01	1SS133
	D510	48T68828F01	1SS133
	D511	48T63462F01	CP., DAN202K
	D801	48T68828F01	1SS133
	D802	48T64134F01	CP., DA204K
	D803	48T84052F01	11ES2
	ZD501	48T90517F20	Zener, HZS4.7NB1
○	ZD502	48T26033W26	Zener, MTZJ5.6A
○	ZD503	48T26033W26	Zener, MTZJ5.6A
	ZD801	48T83128F25	Zener, HZS9C1L
	ZD803	48T83128F27	Zener, HZS9C3L
	ZD804	48T26033W32	Zener, MTZJ6.8A
	ZD805	48T90517F45	Zener, HZS10NB2
	ZD807	48T83128F02	Zener, HZS6A2L

Coil / Switch

	L801	24T70381F13	Coil, Inductor 2.2μH
	S501	40T16096W03	Tact, SKHHLW (RESET)

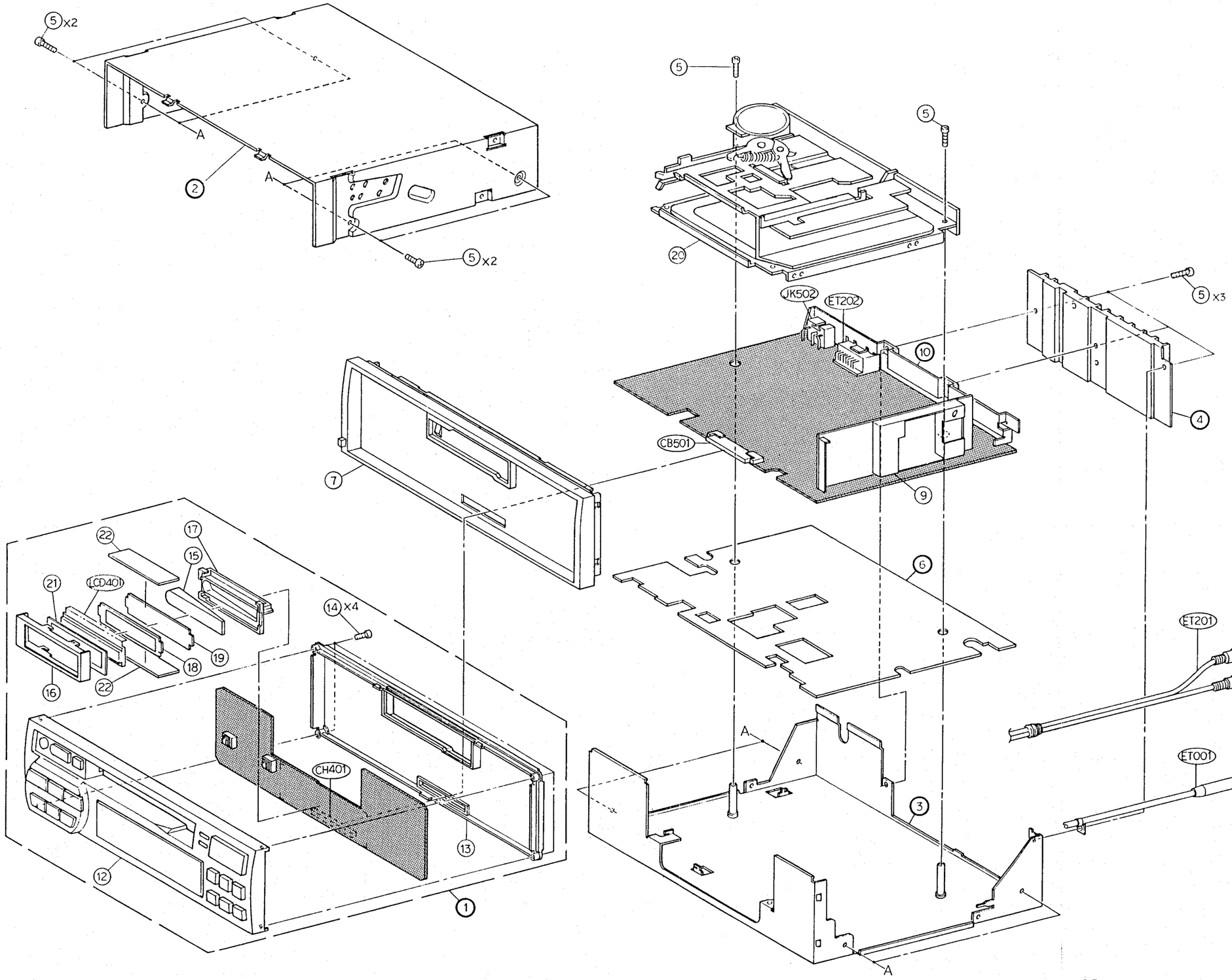
Crystals

	X001	91T45118W18	4.332MHz
	X002	91T45118W43	7.2MHz
	X003	91T15848W01	CER., Lock 4MHz
	X501	91T45118W17	4.194304MHz
	X503	91T45118W44	7.3728MHz

Symbol No.		Part No.	Description	
Capacitors				
	C001	08S65128F69	CP.,	0.01μF
	E001	23S61524F12	ELY.,	100μF / 10V
	C002	08S65128F75	CP.,	0.068μF
	E002	23S61524F13	ELY.,	10μF / 16V
	C003	08S65128F78	CP.,	0.022μF
	C004	08S65128F69	CP.,	0.01μF
	E004	23S61523F08	ELY.,	100μF / 6.3V
	C005	08T15399W02	CP.,	0.033μF
	E005	23S61523F35	ELY.,	0.68μF / 50V
	C007	08S65128F69	CP.,	0.01μF
	E007	23S61523F25	ELY.,	0.1μF / 50V
	C009	08T55390W29	TF,	0.1μF
	E009	23S61524F32	ELY.,	1μF / 50V
	E010	23S61524F32	ELY.,	1μF / 50V
	C011	08T55390W31	TF,	0.15μF
	C012	08T15399W02	CP.,	0.033μF
	C017	08S65128F78	CP.,	0.022μF
	E017	23S61523F25	ELY.,	0.1μF / 50V
	C018	08S65128F78	CP.,	0.022μF
	E018	23S61524F31	ELY.,	0.47μF / 50V
○	C019	08T15399W03	CP.,	0.047μF
●	C019	08T15399W02	CP.,	0.033μF
	E019	23S61523F05	ELY.,	22μF / 6.3V
	C020	08S65128F69	CP.,	0.01μF
	E020	23S61523F30	ELY.,	2.2μF / 50V
	C021	08S65128F35	CP.,	100pF
	E021	23S61524F13	ELY.,	10μF / 16V
○	E022	23S61524F13	ELY.,	10μF / 16V
●	E022	23S61523F12	ELY.,	10μF / 16V
	E023	23S61523F12	ELY.,	10μF / 16V
	C030	08S65128F78	CP.,	0.022μF
	C031	08S65128F57	CP.,	1000pF
	C032	08S65128F78	CP.,	0.022μF
	C033	08S65128F69	CP.,	0.01μF
	C034	08S82122F23	CP.,	27pF
	C035	08S82122F23	CP.,	27pF
	C036	08S53332F57	CP.,	0.1μF
	C037	08S65128F47	CP.,	330μF
	C038	08S65128F53	CP.,	560pF
	C039	08S82122F29	CP.,	47pF
	C040	08S82122F35	CP.,	82pF
	C041	08S65128F29	CP.,	56pF
	C042	08S65128F35	CP.,	100pF
	C099	23T82372F19	ELY., (B.P)	2.2μF / 50V
	E101	23S61523F08	ELY.,	100μF / 6.3V
○	E102	23S61523F29	ELY.,	1μF / 50V
○	E103	23S61523F29	ELY.,	1μF / 50V
	E201	23S61523F27	ELY.,	0.33μF / 50V
	E202	23S61523F27	ELY.,	0.33μF / 50V
	E203	23S61523F34	ELY.,	100μF / 10V

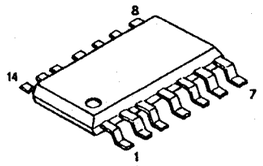
Note : ○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common.

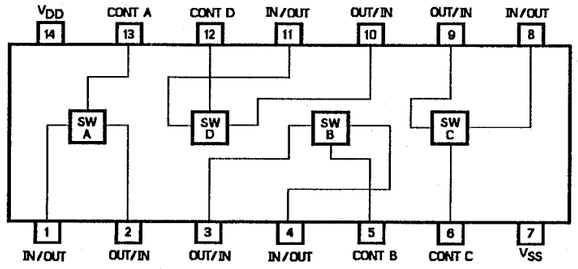
Exploded View (Cabinet)



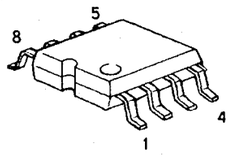
Semi - Conductor Lead Identifications

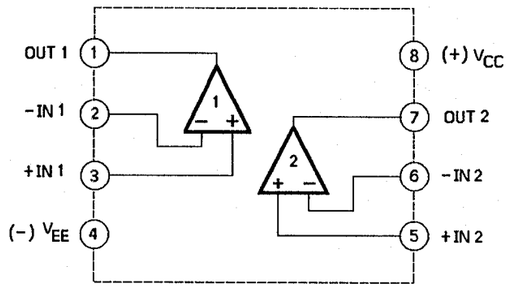
BU4066BF : IC001



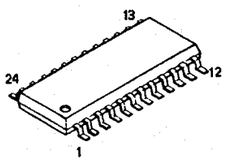


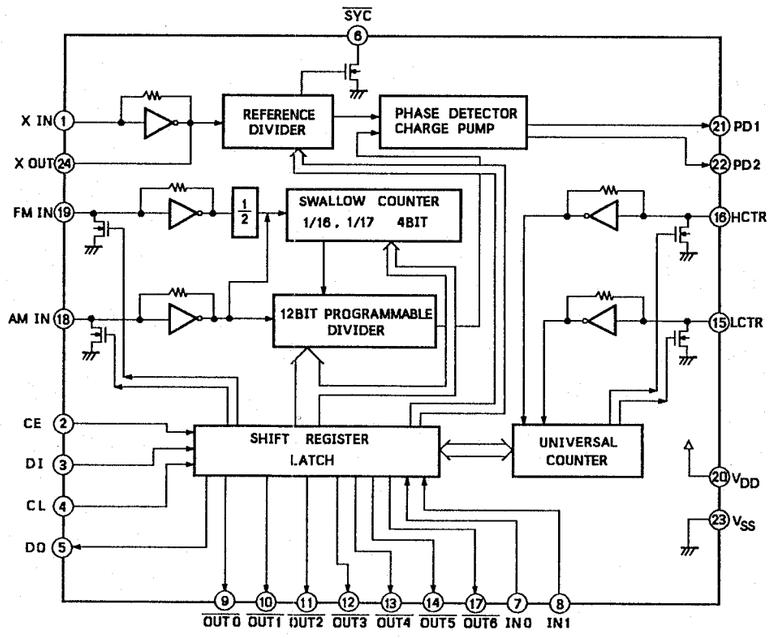
BA4558F : IC002, 005, 208
● **BA4558F** : IC209





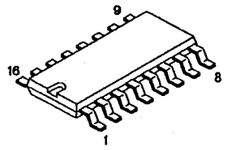
LC7219 : IC003

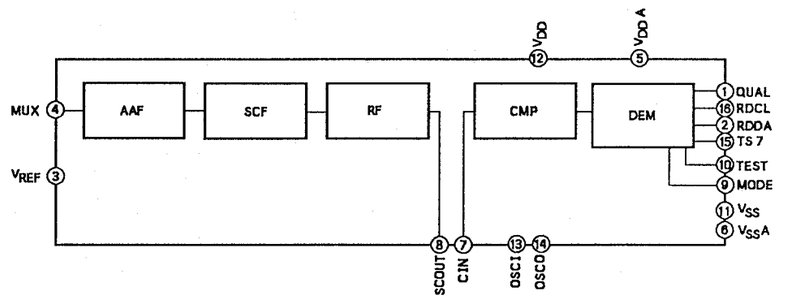




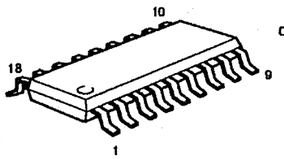
Note : ○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common.

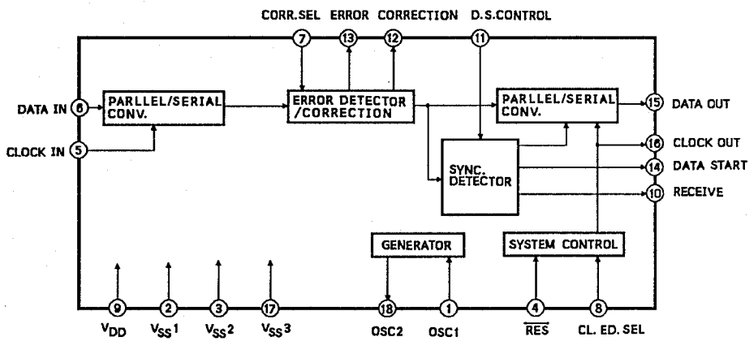
SAA6579T : IC006



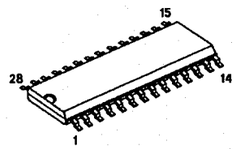


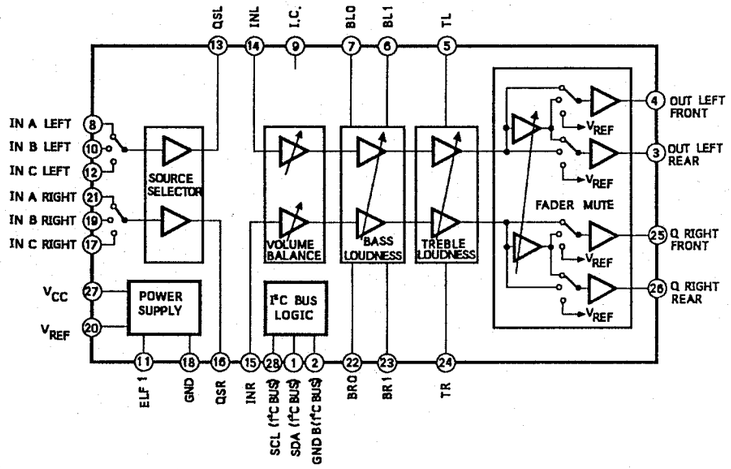
LC7073M : IC007





TEA6300T : IC201





Symbol No.	Part No.	Description
	E204	23S61523F34	ELY., 100μF / 10V
	E205	23S61523F34	ELY., 100μF / 10V
	C209	08S65128F69	CP., 0.01μF
	C212	08S53332F57	CP., 0.1μF
○	C213	08T55390W31	TF, 0.15μF
○	C214	08T55390W31	TF, 0.15μF
○	C215	08T55390W31	TF, 0.15μF
○	C216	08T55390W31	TF, 0.15μF
	C217	08T55390W31	TF, 0.15μF
	C218	08T55390W31	TF, 0.15μF
	C219	08T55390W31	TF, 0.15μF
	C220	08T55390W31	TF, 0.15μF
○	C221	08S53332F57	CP., 0.1μF
	E225	23S61523F12	ELY., 10μF / 16V
	C227	08T55390W23	TF, 0.033μF
	E227	23S61524F13	ELY., 10μF / 16V
	C228	08T55390W23	TF, 0.033μF
	E228	23S61524F13	ELY., 10μF / 16V
	C229	08T55390W14	PF., 5600pF
	C230	08T55390W14	PF., 5600pF
	E231	23S61524F13	ELY., 10μF / 16V
	E232	23S61523F12	ELY., 10μF / 16V
○	E233	23S61524F13	ELY., 10μF / 16V
○	E234	23S61523F12	ELY., 10μF / 16V
	E235	23S61523F12	ELY., 10μF / 16V
	E236	23S61523F12	ELY., 10μF / 16V
○	E237	23S61524F32	ELY., 1μF / 50V
○	E238	23S61524F32	ELY., 1μF / 50V
	E239	23S61523F29	ELY., 1μF / 50V
	E240	23S61523F29	ELY., 1μF / 50V
○	E241	23T55405W01	ELY., 10μF / 16V
	E242	23T55405W01	ELY., 10μF / 16V
○	E243	23T55405W01	ELY., 10μF / 16V
	E244	23T55405W01	ELY., 10μF / 16V
○	E245	23T55378W01	ELY., 220μF / 10V
	E246	23T55378W01	ELY., 220μF / 10V
○	E247	23T55377W14	ELY., 2200μF / 16V
	E248	23T55377W14	ELY., 2200μF / 16V
	E249	23S61523F29	ELY., 1μF / 50V
	E250	23S61523F29	ELY., 1μF / 50V
○	E301	23S61523F12	ELY., 10μF / 16V
○	E302	23S61523F08	ELY., 100μF / 6.3V
○	E303	23S61523F05	ELY., 22μF / 6.3V
○	E304	23S61523F35	ELY., 0.68μF / 50V
○	E305	23S61523F35	ELY., 0.68μF / 50V
	E501	23S61523F17	ELY., 4.7μF / 25V
	E502	23S61523F15	ELY., 47μF / 16V
○	C504	08S65128F69	CP., 0.01μF
	E504	23S61523F34	ELY., 100μF / 10V
○	C505	08S65128F69	CP., 0.01μF
	C507	08S65128F47	CP., 330pF
	C508	08S65128F78	CP., 0.022μF

Symbol No.	Part No.	Description
	C509	08S65128F78	CP., 0.022μF
	E511	23S61523F29	ELY., 1μF / 50V
	C512	08S65128F35	CP., 100pF
	C513	08S65128F35	CP., 100pF
	E514	23S61523F34	ELY., 100μF / 10V
	E515	23S61523F34	ELY., 100μF / 10V
	E516	23S61523F27	ELY., 0.33μF / 50V
	C537	08S65128F78	CP., 0.022μF
	C538	08S65128F78	CP., 0.022μF
	C539	08S82122F23	CP., 27pF
	C540	08S82122F23	CP., 27pF
	C541	08S82122F15	CP., 12pF
	C542	08S82122F15	CP., 12pF
	C544	08S65128F35	CP., 100pF
	C545	08S65128F35	CP., 100pF
	C546	08S65128F35	CP., 100pF
	C547	08S53332F57	CP., 0.1μF
	C801	08S65128F78	CP., 0.022μF
	E801	23T45365W03	ELY., 220μF / 10V
	C802	08T15399W03	CP., 0.047μF
	C803	08S65128F69	CP., 0.01μF
	E803	23S61524F12	ELY., 100μF / 10V
	E804	23S82482F02	ELY., 100μF / 16V
	E807	23S61524F32	ELY., 1μF / 50V
	E809	23S61524F13	ELY., 10μF / 16V
	E811	23S61523F12	ELY., 10μF / 16V

Resistors (All resistors are chip 1/10W±5% unless otherwise noted.)

	R001	06S64995F53	1K ohm
	R002	06S64995F77	10K ohm
	R005	06S64995F77	10K ohm
	R006	06S64995F61	2.2K ohm
	R007	06S64995F77	10K ohm
	R008	06S64995F53	1K ohm
	R009	06S64995F37	220 ohm
	R010	06S64995F85	22K ohm
	R011	06S64995F77	10K ohm
	R013	06S64995F61	2.2K ohm
	R014	06S64995F29	100 ohm
	R016	06S64995F61	2.2K ohm
	R017	06S64995F53	1K ohm
	R018	06S64995F71	5.6K ohm
○	R035	06S64995F65	3.3K ohm
●	R035	06S64995F75	8.2K ohm
○	R036	06S64995F65	3.3K ohm
●	R036	06S64995F75	8.2K ohm
	R037	06S64995F65	3.3K ohm
	R038	06S64995F65	3.3K ohm
○	R039	06S64995F93	47K ohm
●	R039	06S64995F81	15K ohm

Note : ○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common.

Symbol No.		Part No.	Description
○	R040	06S64995F93	47K ohm
●	R040	06S64995F81	15K ohm
	R041	06S64995F77	10K ohm
	R042	06S64996F02	100K ohm
	R043	06S64995F69	4.7K ohm
	R044	06S64996F20	560K ohm
	R045	06S64996F14	330K ohm
	R046	06S64995F29	100 ohm
○	R047	06S64995F61	2.2K ohm
●	R047	06S64995F75	8.2K ohm
	R048	06S64995F77	10K ohm
	R050	06S64995F53	1K ohm
	R051	06S64996F02	100K ohm
	R052	06S64995F77	10K ohm
	R053	06S64995F93	47K ohm
	R056	06S64995F77	10K ohm
	R057	06S64995F93	47K ohm
	R058	06S64995F61	2.2K ohm
	R059	06S64995F29	100 ohm
	R060	06S64995F93	47K ohm
	R063	06S64995F77	10K ohm
	R101	06S64995F41	330 ohm
	R102	06S64995F89	33K ohm
	R103	06S64995F93	47K ohm
	R104	06S64995F93	47K ohm
	R105	06S64995F93	47K ohm
	R106	06S64995F69	4.7K ohm
○	R201	06S64995F53	1K ohm
○	R202	06S64995F53	1K ohm
○	R203	06S64995F55	1.2K ohm
○	R204	06S64995F55	1.2K ohm
	R224	06S64995F77	10K ohm
	R225	06S64995F77	10K ohm
	R226	06S64995F77	10K ohm
	R227	06S64995F77	10K ohm
○	R228	06S64995F85	22K ohm
●	R228	06S64995F91	39K ohm
○	R229	06S64995F85	22K ohm
●	R229	06S64995F91	39K ohm
○	R230	06S64995F85	22K ohm
●	R230	06S64995F91	39K ohm
○	R231	06S64995F85	22K ohm
●	R231	06S64995F91	39K ohm
●	R232	06S64996F02	100K ohm
●	R233	06S64996F02	100K ohm
●	R234	06S64995F75	8.2K ohm
●	R235	06S64995F75	8.2K ohm
●	R236	06S64995F77	10K ohm
●	R237	06S64995F77	10K ohm
	R238	06S64995F37	220 ohm
	R239	06S64995F37	220 ohm
	R242	06S64995F85	22K ohm

Symbol No.		Part No.	Description
	R243	06S64995F85	22K ohm
	R244	06S64995F29	100 ohm
	R245	06S64995F29	100 ohm
○	R246	06S64995F37	220 ohm
○	R247	06S64995F37	220 ohm
	R248	06S64995F37	220 ohm
	R249	06S64995F37	220 ohm
○	R254	06S64995F67	3.9K ohm
○	R255	06S64995F67	3.9K ohm
	R256	06S64995F67	3.9K ohm
	R257	06S64995F67	3.9K ohm
○	R258	06S64995F67	3.9K ohm
○	R259	06S64995F67	3.9K ohm
○	R260	06S64995F67	3.9K ohm
●	R260	06S64995F61	2.2K ohm
○	R261	06S64995F67	3.9K ohm
●	R261	06S64995F61	2.2K ohm
○	R262	06S64995F61	2.2K ohm
○	R263	06S64995F61	2.2K ohm
○	R264	06S64995F61	2.2K ohm
●	R264	06S64995F71	5.6K ohm
○	R265	06S64995F61	2.2K ohm
●	R265	06S64995F71	5.6K ohm
○	R266	06S64995F45	470 ohm
○	R267	06S64995F45	470 ohm
	R268	06S64995F45	470 ohm
	R269	06S64995F45	470 ohm
○	R270	06S53331F40	2.2 ohm 1/8W
○	R271	06S53331F40	2.2 ohm 1/8W
○	R272	06S53331F40	2.2 ohm 1/8W
○	R273	06S53331F40	2.2 ohm 1/8W
	R274	06S53331F40	2.2 ohm 1/8W
	R275	06S53331F40	2.2 ohm 1/8W
	R276	06S53331F40	2.2 ohm 1/8W
	R277	06S53331F40	2.2 ohm 1/8W
○	R281	06S64996F14	330K ohm
○	R282	06S64996F14	330K ohm
●	R283	06S64995F93	47K ohm
●	R284	06S64995F93	47K ohm
○	R301	06S64995F92	43K ohm
○	R302	06S64995F85	22K ohm
●	R306	06S64995F53	1K ohm
●	R307	06S64995F53	1K ohm
	R501	06S64995F53	1K ohm
	R503	06S64996F02	100K ohm
	R504	06S64995F53	1K ohm
	R505	06S64995F77	10K ohm
	R510	06S64996F02	100K ohm
	R511	06S64996F02	100K ohm
○	R512	06S64995F77	10K ohm
○	R513	06S64995F77	10K ohm
	R514	06S64995F85	22K ohm

Note : ○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common.

Symbol No.	Part No.	Description
R515	06S64995F85	22K ohm
R516	06S53330F85	22K ohm 1/8W
R517	06T70072F37	220 ohm 1/4W
R519	06S64995F77	10K ohm
R523	06S64995F77	10K ohm
R524	06S64995F77	10K ohm
R525	06S64995F77	10K ohm
R526	06S64995F77	10K ohm
R527	06S64995F77	10K ohm
R528	06S64995F77	10K ohm
R529	06S64995F77	10K ohm
R535	06S64995F77	10K ohm
R547	06S64995F93	47K ohm
R548	06S64995F77	10K ohm
R558	06S64995F85	22K ohm
R559	06S64996F02	100K ohm
R560	06S64995F77	10K ohm
R561	06S64995F93	47K ohm
R562	06S64995F93	47K ohm
R563	06S64995F93	47K ohm
R564	06S64995F93	47K ohm
R565	06S64995F93	47K ohm
R566	06S64995F69	4.7K ohm
R567	06S64995F93	47K ohm
R568	06S64995F93	47K ohm
R569	06S64995F93	47K ohm
R570	06S64995F93	47K ohm
R571	06S64995F93	47K ohm
R572	06S64995F93	47K ohm
○ R573	06S64995F93	47K ohm
● R574	06S64995F93	47K ohm
R575	06S64995F93	47K ohm
R576	06S64995F93	47K ohm
R577	06S64995F93	47K ohm
R579	06S64995F93	47K ohm
R580	06S64995F93	47K ohm
R581	06S64995F93	47K ohm
R582	06S64996F02	100K ohm
R583	06T70072F17	33 ohm 1/4W
R584	06S64996F38	10M ohm
R585	06S64995F62	2.4K ohm
R801	06S64995F65	3.3K ohm
R802	06S64995F65	3.3K ohm
R803	06T70072F53	1K ohm 1/4W
R804	06S64995F77	10K ohm
R805	06T70072F53	1K ohm 1/4W
R807	06T70072F53	1K ohm 1/4W
R812	06S64995F77	10K ohm
R813	06S64995F69	4.7K ohm
R815	06S53330F69	4.7K ohm 1/8W
R816	06S53330F65	3.3K ohm 1/8W
R817	06T70072F39	270 ohm 1/4W

Symbol No.	Part No.	Description
R818	06S64995F77	10K ohm
R819	06S53330F61	2.2K ohm 1/8W
R820	06S64995F77	10K ohm
R821	06T70072F03	6.8 ohm 1/4W
R822	06T70072F03	6.8 ohm 1/4W
R823	06S64995F77	10K ohm
R824	06S64995F77	10K ohm
R825	06S53330F61	2.2K ohm 1/8W
○ R826	06S64995F77	10K ohm
○ R827	06S53330F61	2.2K ohm 1/8W
R828	06S53330F77	10K ohm 1/8W
R830	06T70072F03	6.8 ohm 1/4W
R833	06T70072F53	1K ohm 1/4W
R834	06T70072F53	1K ohm 1/4W
R835	06T70072F53	1K ohm 1/4W
R836	06T70072F53	1K ohm 1/4W
R837	06S64995F69	4.7K ohm
R838	06S64995F77	10K ohm
○ VR101	18T15356W13	Variable, 10K ohm
○ VR102	18T15356W13	Variable, 10K ohm

Front P. C. Board

IC's

IC401	51T16618W02	MC14014BFEL
IC402	51T83905F03	LC7582W
IC403	51T83905F03	LC7582W

Diode

D401	48T94471F01	CP., IMN10

Switches

S413	40T83612F01	Tact, SKHFAD (DOWN)
S414	40T83612F01	Tact, SKHFAD (UP)
S451	40T55182W01	Tact, SKHVBC (UP / FF)
○ S452	40T55182W01	Tact, SKHVBC (A.P.I)
S453	40T55182W01	Tact, SKHVBC (DN / REW)

Note : ○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common.

	Symbol No.	Part No.	Description
○	S454	40T55182W01	Tact, SKHVBC (M.I.X / SCAN)
○	S455	40T55182W01	Tact, SKHVBC (DX / A.MEMO / REPEAT)
●	S455	40T55182W01	Tact, SKHVBC (A.P.I / REPEAT)
○	S456	40T55182W01	Tact, SKHVBC (T.INFO / PTY)
●	S456	40T55182W01	Tact, SKHVBC (T.INFO / A.ME / M.I.X)
○	S457	40T55182W01	Tact, SKHVBC (2 / P.S.DN)
●	S457	40T55182W01	Tact, SKHVBC (2)
○	S458	40T55182W01	Tact, SKHVBC (3 / P.S.UP)
●	S458	40T55182W01	Tact, SKHVBC (3)
○	S459	40T55182W01	Tact, SKHVBC (1 / DOLBY B)
●	S459	40T55182W01	Tact, SKHVBC (1)
	S460	40T55182W01	Tact, SKHVBC (5 / H)
	S461	40T55182W01	Tact, SKHVBC (6 / M / PROG)
○	S462	40T55182W01	Tact, SKHVBC (4 / CT / B.SKIP)
●	S462	40T55182W01	Tact, SKHVBC (4 / CT)
	S465	40T55182W01	Tact, SKHVBC (MODE / LOUD)
	S466	40T55182W01	Tact, SKHVBC (CLOCK)
	S467	40T55182W01	Tact, SKHVBC (EJECT)
	S468	40T55182W01	Tact, SKHVBC (POWER)
	S469	40T55182W01	Tact, SKHVBC (TAPE)
	S470	40T55182W01	Tact, SKHVBC (DISC)
○	S471	40T55182W01	Tact, SKHVBC (TUNER / BAND / D.A.P)
●	S471	40T55182W01	Tact, SKHVBC (TUNER / BAND / DX)

Lamps

	PL401	65T45353W02	6V-70mA
	PL402	65T45353W02	6V-70mA
	PL403	65T45353W02	6V-70mA
	PL404	65T45353W02	6V-70mA
	PL405	65T55442W01	6.7V-85mA

LED's

○	LD401	48T16167W02	MBG4868K(GRN)
	LD402	48T16167W02	MBG4868K(GRN)

Capacitors

	C401	08T15399W03	CP., 0.047μF
	E401	23S61523F05	ELY., 22μF / 6.3V
	C402	08S65128F55	CP., 680pF
	E402	23S61523F05	ELY., 22μF / 6.3V
	C403	08T15399W03	CP., 0.047μF
	C404	08S65128F55	CP., 680pF
	C405	08T15399W03	CP., 0.047μF

Resistors (All resistors are chip 1/10W±5% unless otherwise noted.)

	R401	06S64995F77	10K ohm
	R402	06S64995F77	10K ohm
	R403	06S64995F77	10K ohm
	R404	06S64995F77	10K ohm
	R405	06S64995F77	10K ohm
	R406	06S64995F77	10K ohm
	R407	06S64995F77	10K ohm
	R410	06S64995F93	47K ohm
	R411	06S64995F93	47K ohm
	R412	06S64995F93	47K ohm
	R413	06S64995F93	47K ohm
	R414	06S64995F93	47K ohm
	R415	06S64995F93	47K ohm
	R416	06S64995F93	47K ohm
	R417	06S64995F93	47K ohm
	R420	06T70072F25	68 ohm 1/4W
	R421	06T70072F21	47 ohm 1/4W
○	R432	06T70072F49	680 ohm 1/4W
	R433	06T70072F49	680 ohm 1/4W
	R440	06S64995F93	47K ohm
	R441	06S64995F93	47K ohm
	R442	06S64995F77	10K ohm

○ GR Control P. C. Board

IC's / Transistors

	IC1501	51T25621W02	IC, AN6275NK
	IC1502	51T67915F01	IC, M51143AL
	Q1501	48T84366F05	2SB1243
	Q1502	48T94606F12	CP., DTC144TU

Capacitors

	E1501	23S61524F32	ELY., 1μF / 50V
	C1502	08T35374W01	CP., 0.1μF
	C1503	08T35374W01	CP., 0.1μF
	C1504	08T35374W01	CP., 0.1μF
	C1505	08S65128F15	CP., 15pF

Note : ○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common.

Symbol No.	Part No.	Description
Resistors (All resistors are chip 1/10W±5% unless otherwise noted.)		
R1501	06S64995F77	10K ohm
R1502	06S64995F77	10K ohm
R1503	06S64996F10	220K ohm
R1504	06S64996F26	1M ohm
R1505	06S64996F18	470K ohm
R1506	06S64996F01	91K ohm
● GR Control P. C. Board		
IC's		
IC1201	51T64606F02	TA7705F
IC1701	51T25621W02	AN6275NK
Transistor / Diode		
Q1701	48T84366F05	2SB1243
D1201	48T44813F01	Diode, MA165TA
Capacitors		
C1201	08S53332F31	CP., 470pF
E1201	23S82482F02	ELY., 100μF / 16V
C1202	08S53332F31	CP., 470pF
E1202	23S61523F12	ELY., 10μF / 16V
C1203	08S53332F31	CP., 470pF
E1203	23S61523F07	ELY., 47μF / 6.3V
C1204	08S53332F31	CP., 470pF
E1204	23S61523F07	ELY., 47μF / 6.3V
C1205	08S53332F48	CP., 0.012μF
E1205	23S61523F17	ELY., 4.7μF / 25V
C1206	08S53332F48	CP., 0.012μF
E1206	23S61523F17	ELY., 4.7μF / 25V
Resistors (All resistors are chip 1/8W±5% unless otherwise noted.)		
R1201	06S53330F29	100 ohm
R1202	06S53330F65	3.3K ohm
R1203	06S53330F32	130 ohm
R1204	06S53330F32	130 ohm
R1205	06S64996F14	330K ohm1/10W
R1206	06S64996F14	330K ohm1/10W
R1207	06S64995F78	11K ohm1/10W
R1208	06S53330F78	11K ohm
R1209	06S53330F81	15K ohm
R1210	06S53330F81	15K ohm
R1211	06S53330F65	3.3K ohm
○ GR Audio P. C. Board		
IC / Diode		
IC1201	51T15146W01	IC, TA7705P
D1201	48T44813F01	MA165TA
Capacitors		
E1201	23S61524F13	ELY., 10μF / 16V
C1202	08S72783F27	CP., 220pF
E1202	23S61524F08	ELY., 100μF / 6.3V
C1203	08S72783F27	CP., 220pF
E1203	23S61524F08	ELY., 100μF / 6.3V
C1204	08S72783F27	CP., 220pF
E1204	23S82482F02	ELY., 100μF / 16V
C1205	08S72783F27	CP., 220pF
E1205	23S61524F18	ELY., 4.7μF / 25V
E1206	23S61524F18	ELY., 4.7μF / 25V
C1208	08T35122W02	TF, 0.012μF
C1209	08T35122W02	TF, 0.012μF
Resistors (All resistors are chip 1/10W±5% unless otherwise noted.)		
R1201	06S53330F29	100 ohm 1/8W
R1202	06S53330F32	130 ohm 1/8W
R1203	06S53330F32	130 ohm 1/8W
R1204	06S64996F14	330K ohm
R1205	06S64996F14	330K ohm
R1208	06S64995F79	12K ohm
R1209	06S64995F79	12K ohm
R1210	06S64995F81	15K ohm
R1211	06S64995F81	15K ohm
R1212	06S64995F65	3.3K ohm
R1213	06S53330F65	3.3K ohm 1/8W
R1214	06S53330F85	22K ohm 1/8W
R1215	06S64995F85	22K ohm

Note : ○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common.

	Symbol No.	Part No.	Description
			Miscellaneous
	CB501	09T45337W03	17Pin Connector
	CH401	09T45338W01	17Pin Connector
	ET001	01T15513W04	Antenna Receptacle
	ET201	01T55244W03	RCA Output Connector
	ET202	09T55175W16	SP. Output & Power Supply Connector
○	HD1101	88T15971W01	Head
●	HD1101	88T10373W01	Head
	JK502	09T92817F02	DIN Socket (8P)
	LCD401	65T55213W01	LCD Display
○	M1501	01V51800W42	Assy., Main Motor (13.2V-105mA)
●	M1501	01V53200W99	Assy., Main Motor (13.2V-105mA)
	PT1501	51T15144W01	Sensor, Photo ON2170-R
	S1501	40T15222W01	Switch, Detector (PACK IN)
	S1502	40T15382W01	Switch, Detector (PACK DOWN)
	S1503	40T15382W01	Switch, Detector (METAL)
	SD1501	01T10369W02	Assy., Eject Solenoid
	SD1502	01T15249W01	Assy., Play Solenoid
	SD1503	01T10371W01	Assy., RF Solenoid

Symbol No.	Part No.	Description

Note : ○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common.

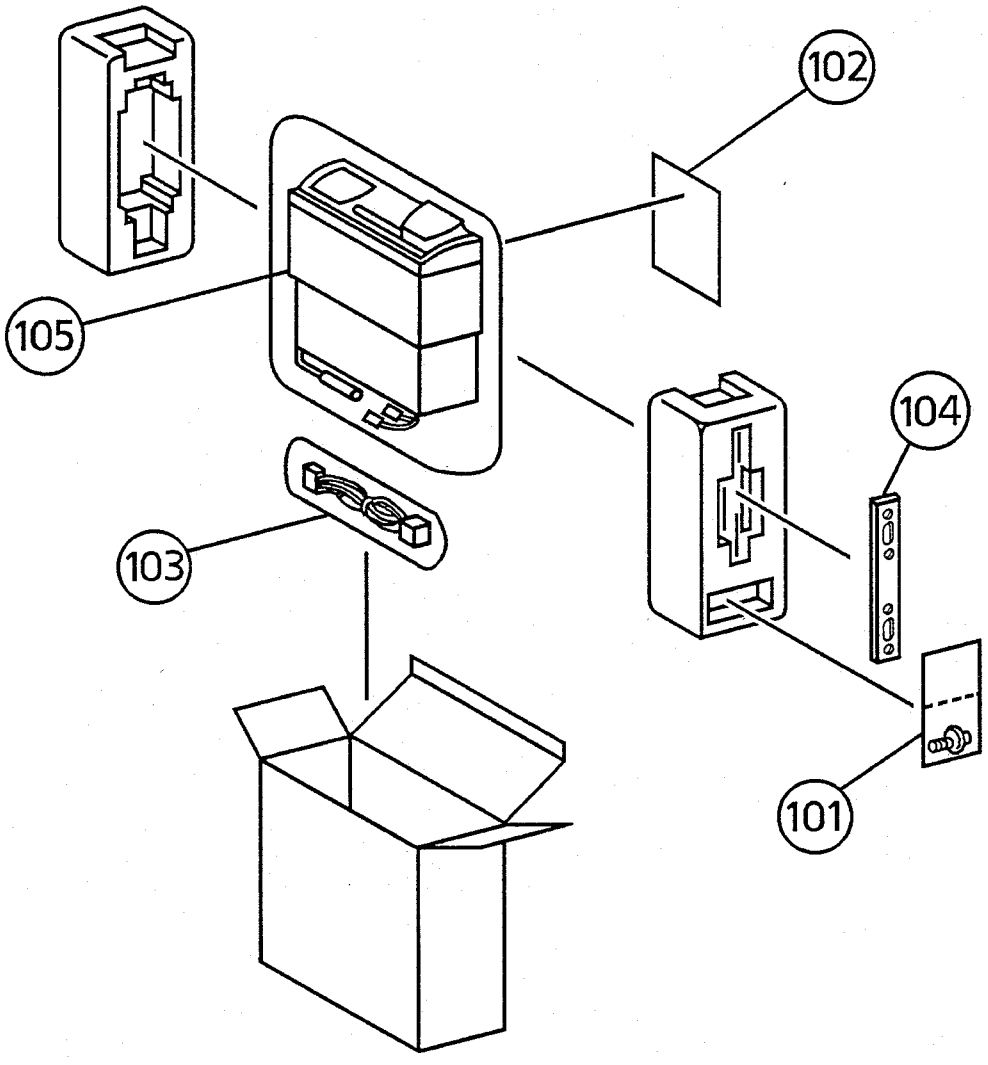
Packing Assembly Parts List

	Symbol No.	Part No.	Description
	101-1	02B47353F01	Nut, Hex. (M5)
	101-2	03S72235F42	Screw, Pan (M5×8)
	101-3	46A42363F01	Stud, Bolt
	102	68P50390W16	Owner's Manual
○	103	01T55176W02	Power Supply Connector
●	103	01T55176W05	Power Supply Connector
	104	07B64552F01	Bracket, Strap Receiver
	105	15D50406W01	Case, Inner

Symbol No.	Part No.	Description

Note : ○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common.

Packing Method View



Cabinet Assembly Parts List

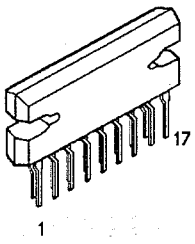
Notes : ● No parts number on parts list are not supplied.
● Parts marked * will need a long delivery time, or may be not supplied in some cases.

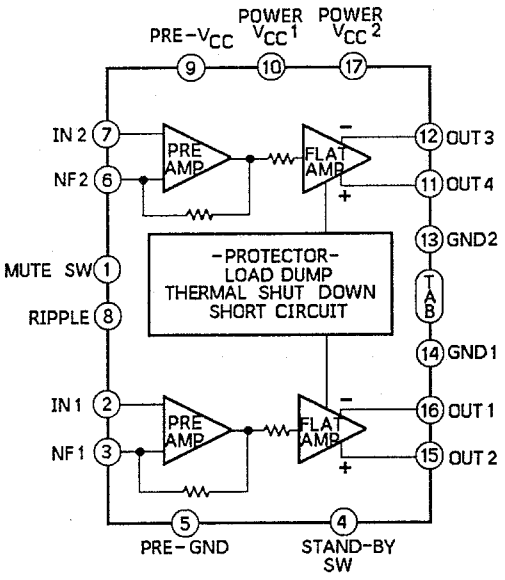
	Symbol No.	Index	Part No.	Description
○	*1	5-C	01V51900W90	Assy., Nose Unit
●	*1	5-C	01V53100W29	Assy., Nose Unit
	5		03S44205G29	Screw, Pan (M2.6×6)
○	7	3-C	13C50289W01	Assy., Front Escutcheon
●	7	3-C	13C50289W04	Assy., Front Escutcheon
	9	3-E	77B51261W01	FM / AM Tuner, MB4R102A (FE001)
○	12	5-A	13C50277W01	Assy., Nosepiece
●	12	5-A	13C50308W04	Assy., Nosepiece
	13	5-C	13D50288W01	Nose, Bottom
	14	4-C	03S68555F36	Screw, Pan (M2×10)
	15	3-B	61A50305W01	Lens, LCD
	16	4-A	15A50303W01	Cover, LCD
	17	3-B	15B50304W01	Case, LCD
	18	4-B	26A50306W01	Reflector, Sheet (R)
	19	4-B	26A50306W03	Reflector, Sheet (R)
○	*20	2-D	81D40887W02	Cassette Deck, GR75H120
●	*20	2-D	81D50232W01	Cassette Deck, GR75H110
	21	4-A	14A58069W01	Insulator, LCD
	22		75T35021W05	Rubber, Electric

Symbol No.	Index	Part No.	Description

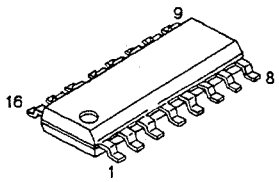
Notes : ○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common.

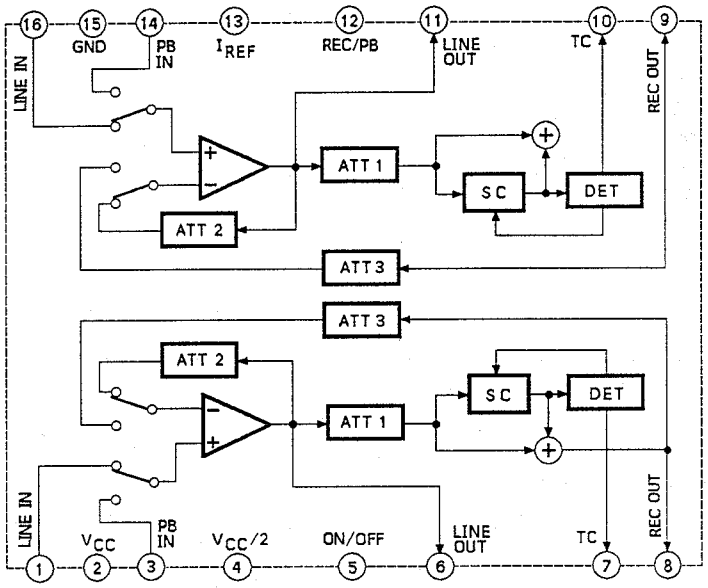
○ **TA8215H** : IC210
TA8215H : 211



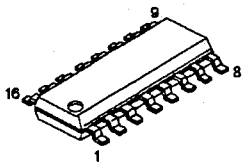


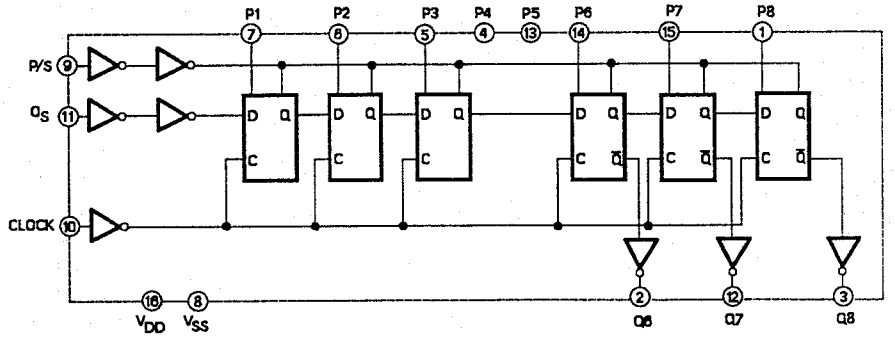
○ **CXA1163M** : IC301





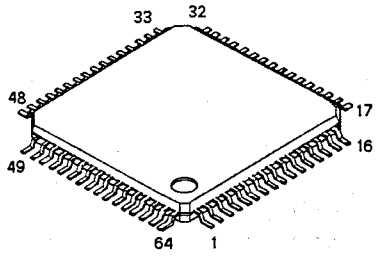
MC14014BFEL : IC401

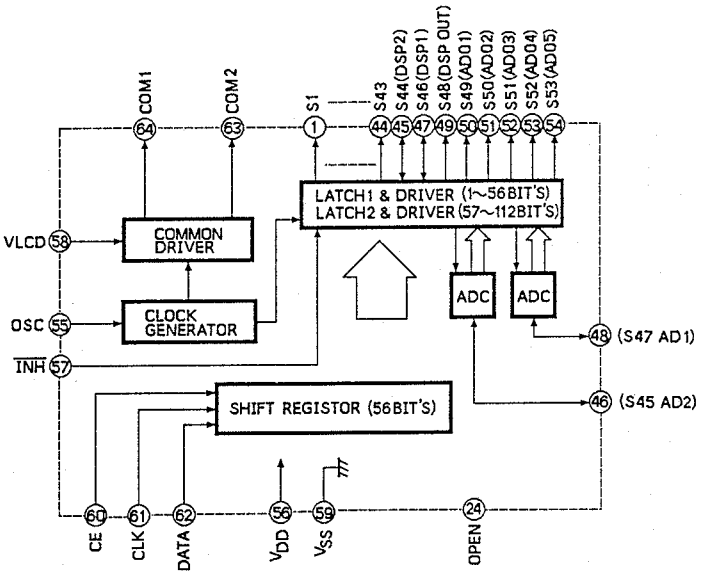




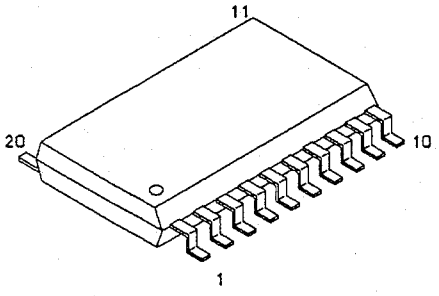
Note : ○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common.

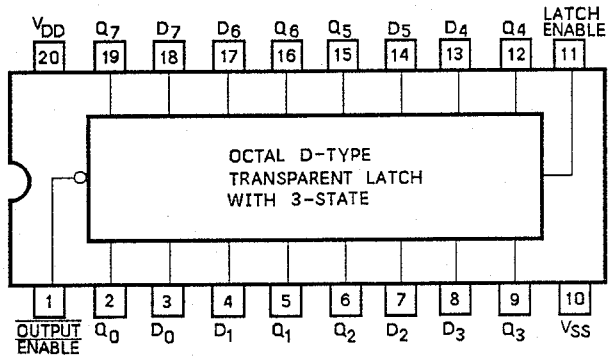
LC7582W : IC402, 403



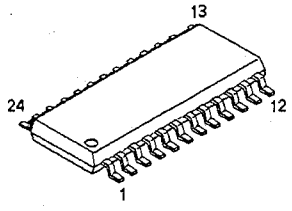


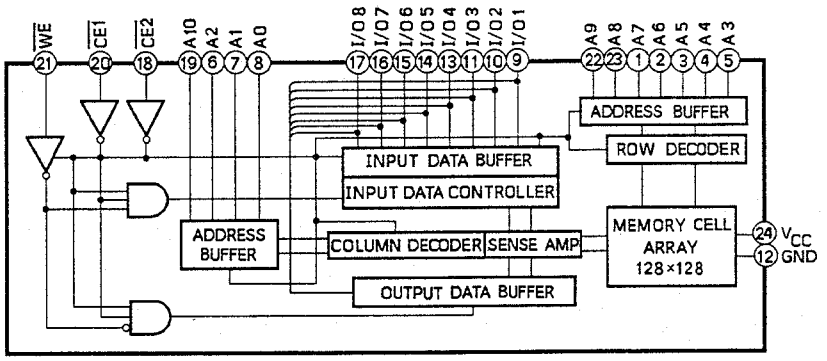
μPD74HC373 : IC502



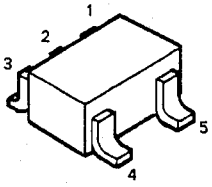

VDD Q7 D7 D6 Q6 Q5 D5 D4 Q4 LATCH ENABLE
20 19 18 17 16 15 14 13 12 11
OCTAL D-TYPE
TRANSPARENT LATCH
WITH 3-STATE
1 2 3 4 5 6 7 8 9 10
OUTPUT ENABLE Q0 D0 D1 Q1 Q2 D2 D3 Q3 VSS

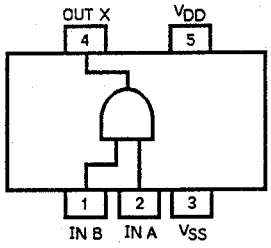
LC3516AML : IC503



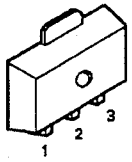

WE CE1 CE2 A10 A2 A1 A0
21 20 18 19 6 7 8
I/O8 I/O7 I/O6 I/O5 I/O4 I/O3 I/O2 I/O1
17 16 15 14 13 11 10 9
A9 A8 A7 A6 A5 A4 A3
22 23 1 2 3 4 5
ADDRESS BUFFER
ROW DECODER
INPUT DATA BUFFER
INPUT DATA CONTROLLER
ADDRESS BUFFER
COLUMN DECODER
SENSE AMP
MEMORY CELL ARRAY 128×128
OUTPUT DATA BUFFER
24 VCC
12 GND

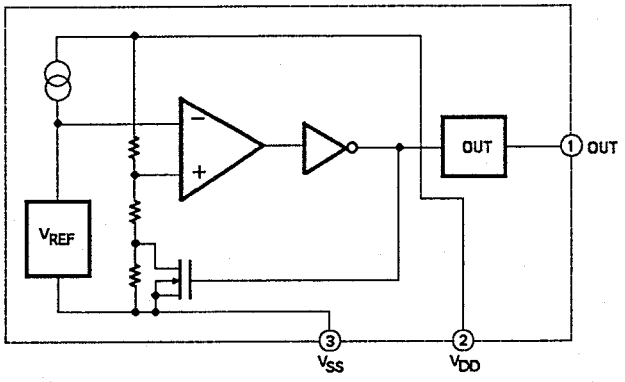
TC4S81F : IC504



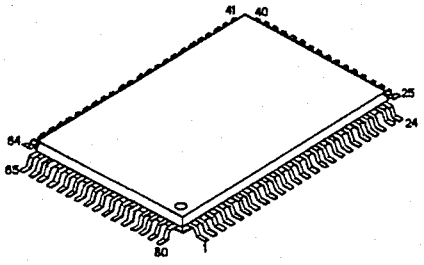


S-8052HNM-CR : IC508



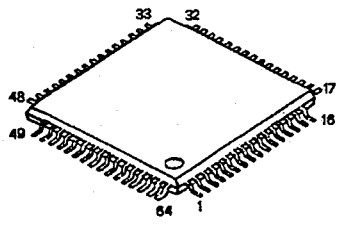


45609W13 : IC510



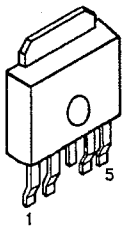
PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O
1	NOSE ON	I	23	PWR ON	O	45	$\overline{\text{LCD INH}}$	O	67	GND	—
2	AV_{REF}	—	24	$\overline{\text{MUTE}}$	O	46	$\overline{\text{DTS MUTE}}$	I	68	GND	—
3	V_{DD}	—	25	O.REM	O	47	ACC+5	—	69	GND	—
4	V_{DD}	—	26	LCD+B ON	O	48	CHG IN	I	70	GND	—
5	REF+B	O	27	IN PAU	I	49	GND	—	71	GND	—
6	PLY SOL.	O	28	IN-INT	I	50	DTS STS	I	72	GND	—
7	RF SOL.	O	29	CHG OUT	O	51	DTS CMD	O	73	AV_{SS}	—
8	EJECT SOL.	O	30	EV CLK	O	52	$\overline{\text{DTS SCK}}$	I	74	GND	—
9	MOTOR CONT	O	31	EV DATA	O	53	BAT+5	—	75	GND	—
10	O.MOTER	O	32	NC	—	54	V_{SS}	—	76	PK DN SW	I
11	F/$\overline{R}$	O	33	V_{SS}	—	55	XT1	—	77	RUN DET	I
12	O.FAST	O	34	NC	—	56	NC	—	78	V_{SS}	—
13	PK IN SW	I	35	T/$\overline{R}$	O	57	V_{SS}	—	79	GND	—
14	MS.DET	I	36	$\overline{\text{DOLBY}}$	O	58	X1	—	80	GND	—
15	GND	—	37	LCD CE	O	59	X2	—			
16	GND	—	38	DTS CE	I	60	$\overline{\text{RESET}}$	I			
17	GND	—	39	DTS START	I	61	DTS STBY	O			
18	$\overline{7521/7515}$	I	40	KEY P/S	O	62	GND	—			
19	GND	—	41	KEY IN	I	63	GND	—			
20	TP ALM	I	42	LCD/KEY CLK	O	64	GND	—			
21	NOSE PWR	O	43	LCD DATA 1	O	65	GND	—			
22	POW IC ON	O	44	LCD DATA 2	O	66	GND	—			

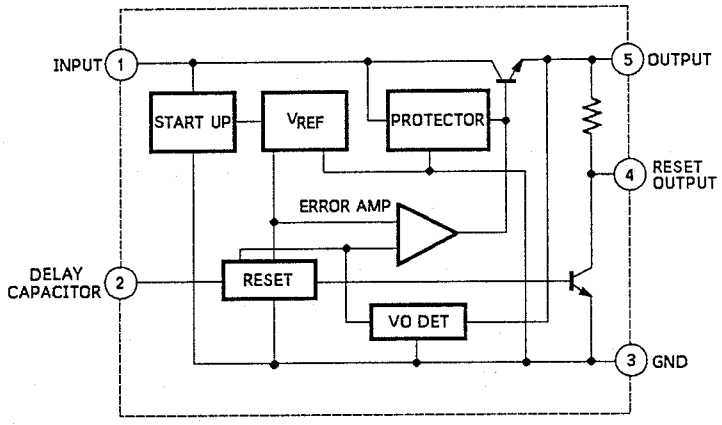
45258W01 : IC511



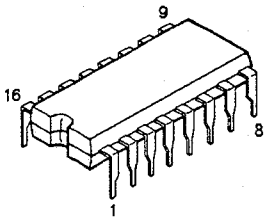
PIN NO.	CORD ADDRESS	I/O	PIN NO.	CORD ADDRESS	I/O	PIN NO.	CORD ADDRESS	I/O
1	R.D	O	23	AD2	I/O	45	$\overline{\text{SK}}$	I
2	NC	—	24	V_{SS}	—	46	SERCH	I
3	$\overline{\text{DTS MUTE}}$	O	25	AD1	I/O	47	$\overline{\text{MALTI PATH}}$	I
4	$\overline{\text{7073 RESET}}$	O	26	AD0	I/O	48	$\overline{\text{ADJON}}$	I
5	50K REF	O	27	LE	O	49	S-METER	I
6	$\overline{\text{RESET}}$	I	28	DTS STBY	I	50	$\overline{\text{DK}}$	I
7	X2	O	29	RD CL	I	51	$\overline{\text{RDS}}$	I
8	X1	—	30	RD ST	I	52	PLL CLK	O
9	V_{SS}	—	31	DATA	I	53	PLL DO	O
10	SRAM CE2	O	32	DI	I	54	$\overline{\text{LPF SW}}$	O
11	A14	O	33	A.IN	I	55	IF MUTE	O
12	NC	—	34	DTS-START	I	56	PLL CE	—
13	NC	—	35	DTS-CMD	I	57	NC	—
14	NC	—	36	NC	—	58	LW	O
15	A10	O	37	NC	—	59	F/$\overline{A}$	O
16	A9	O	38	DTS-CLK	I	60	L/$\overline{D}$	O
17	A8	O	39	DTS-STS	O	61	NC	—
18	AD7	I/O	40	$\overline{\text{EA}}$	I	62	DTS CE	I
19	AD6	I/O	41	V_{DD}	—	63	SD	I
20	AD5	I/O	42	A.V_{SS}	—	64	WR	O
21	AD4	I/O	43	A.V_{REF}	I			
22	AD3	I/O	44	$\overline{\text{ST}}$	I			

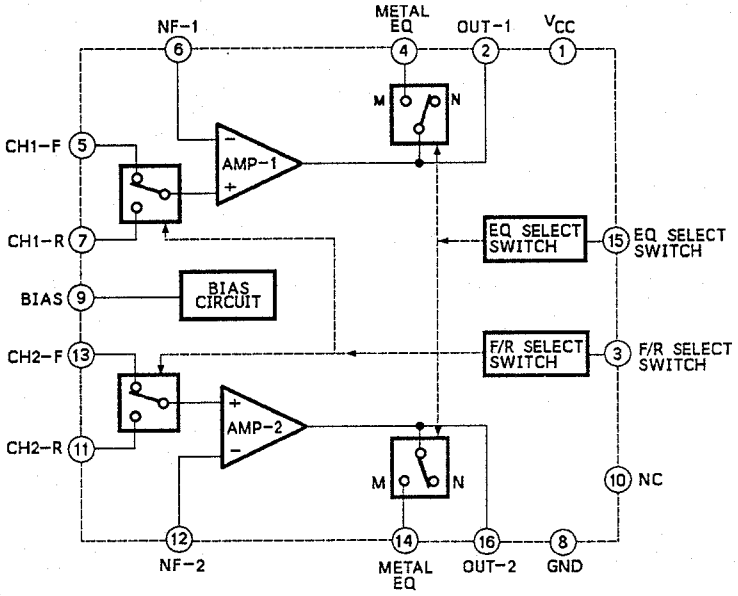
L78LR05GFA : IC801



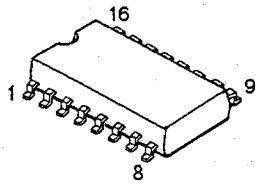


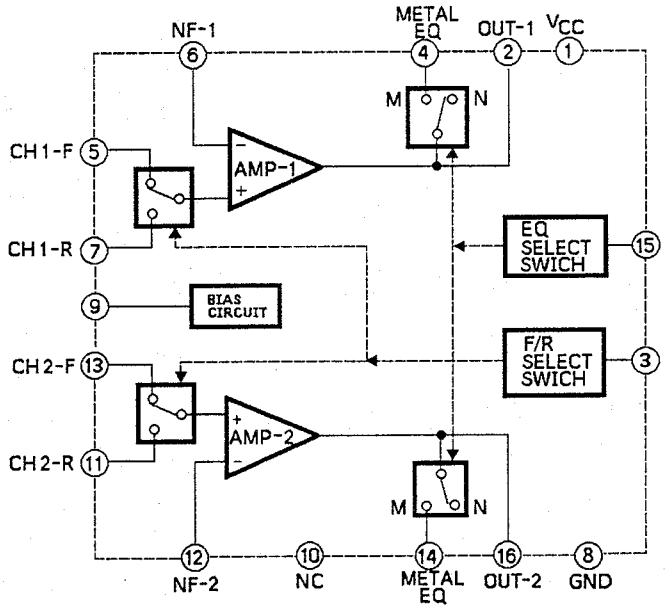
○ **TA7705P** : IC1201





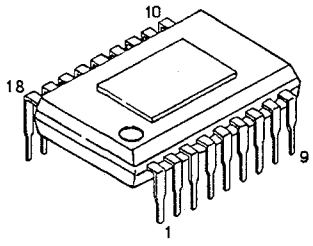
● **TA7705F** : IC1201

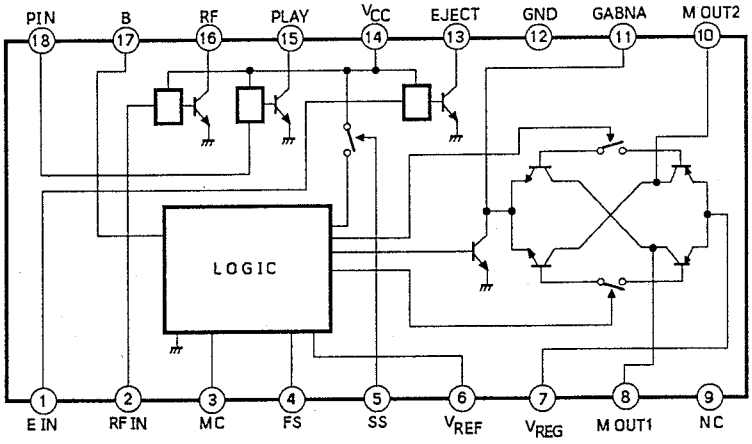




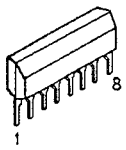
Note : ○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common.

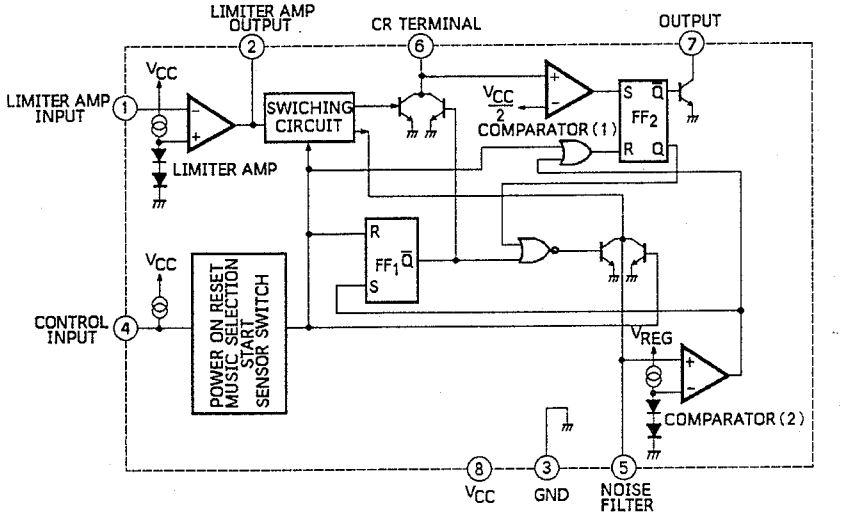
○ **AN6275NK** : IC1501
● **AN6275NK** : IC1701





○ **M51143AL** : IC1502





Note : ○ : For 7521R Model Only, ● : For 7515R Model Only, Others : Common.

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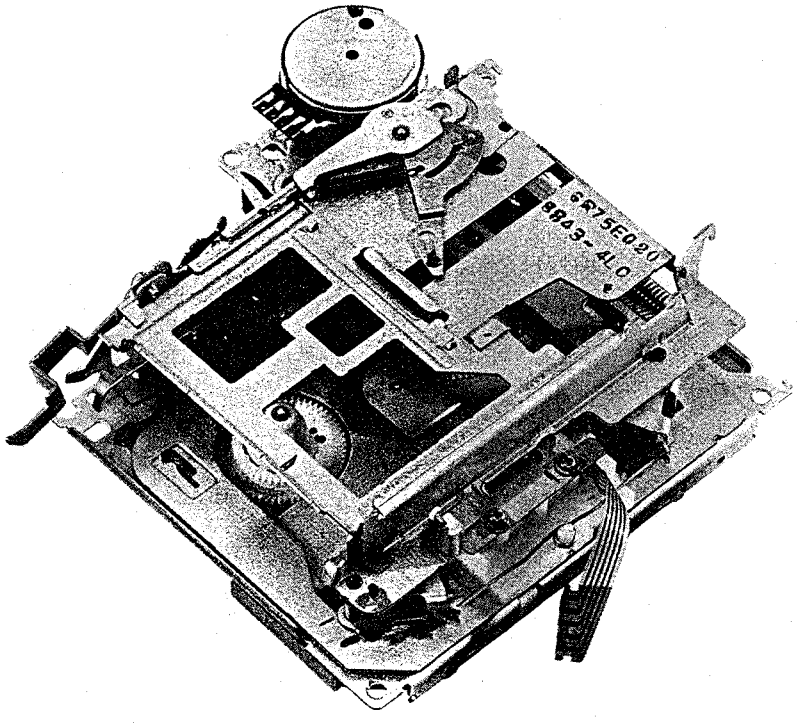
ALPINE®

SERVICE MANUAL

Cassette Deck Mechanism

ADDENDUM & REVISED(V)



GR/GR-Y SERIES

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List of Usable Lock Washers

	SIZE	PARTS NO.	QUANTITY			
			GR75E Series	GR75L Series	GR-Y Series	GR75H Series
1	(M1.2 × 3.5 × 0.25)	04B41345P01	4	4	4	2
2	(M1.7 × 3.5 × 0.25)	04B41345P02	1	1	1	4
3	(M1.2 × 2.5 × 0.25)	04B41345P11	8	8	8	9
4	(M1.7 × 3.5 × 0.35)	04B41345P12	2	2	2	2
5	(M1.2 × 3.5 × 0.35)	04B41345P15	2	2	2	2
6	(M1 × 2.5 × 0.25)	04B41345P17	1	1	1	2
7	(M2.6 × 5 × 0.25)	04B41345P29	1	1	1	1
8	(M3.1 × 8 × 0.05)	04B41345P30	1	1	1	1
9	(M3.1 × 5 × 0.35)	04B41345P32	2	2	2	2
10	(M1.2 × 2.5 × 0.3)	04B41345P34	1	1	1	0
11	(M1.7 × 2.8 × 0.25)	04B41345P35	1	1	1	2
12	(M2.1 × 4 × 0.25)	04B41345P37	1	1	1	0
13	(M2.1 × 4 × 0.13)	04S40075G05	2	2	2	0
14	(M2.1 × 4 × 0.3)	04S40075G58	0	0	0	1

List of Usable Oil

1) Molykote G paste
2) Grease EM-30L
3) Grease PG-671

List of Usable Jigs

1) GR bottom gear jig (Part No. 44A20788W01)
2) Head height adjustment gauge
   AI-500 (Part No. AI-500)

Memo

Disassembly, Assembly and Replacement of Functional Parts

1. Disassembly and Assembly of Bottom Cover

(1) Turn the mechanism around as shown in Figure 1.
(2) Remove M1 lock washer ① as shown in Figure 1.
(3) Remove three screws ② as shown in Figure 1.
(4) Lift the bottom cover slowly from the position Ⓐ-1, pull the hooks out of the holes in the chassis, and remove the bottom cover as shown in Figure 1.
(5) When remounting the bottom cover, first turn the front of the mechanism up as shown in Figure 2.
(6) Slide the slider in the direction Ⓐ-2 as shown in Figure 2.
(7) Push down the cassette holder in the direction Ⓐ-3 as shown in Figure 2.
(8) Pull the door pin in the direction Ⓐ-4 so that the mechanism is locked in as shown in Figure 2.
(9) Turn the mechanism around as shown in Figure 3.
(10) Pull the automatic metal lever in the direction Ⓐ-5 and the RF solenoid chip in the direction Ⓐ-6 as shown in Figure 3.
(11) Insert the hooks of the bottom cover into the chassis in the direction Ⓐ-7, and then join the part Ⓐ-8 of the bottom cover to the chassis slowly, making sure that the 3 points indicated with the straight lines in the Figure 3 are fitted properly.
If there are troubles in mounting the bottom cover, do not apply force but remove the bottom cover once again and check the positions of the individual parts. (Refer to Figure 3.)
(12) Since the hooks marked Ⓐ-8 will be lifted slightly as shown in Figure 4, insert the jig through the hole Ⓐ-9, and fix it turning the jig slightly in the direction Ⓐ-11.
Instead of operation (12), turn the gear nose slowly with a precision screwdriver etc., taking care not to damage it.
After 2 to 3 turns, it will click into place.
(Refer to Figures 4 and 5.)
(13) Fix the screws and the lock washer that have been removed.

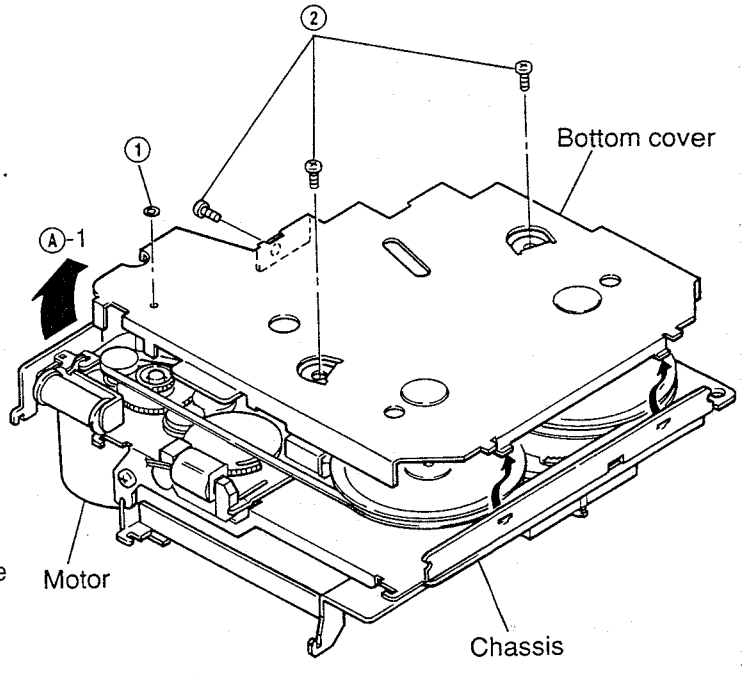


Figure 1

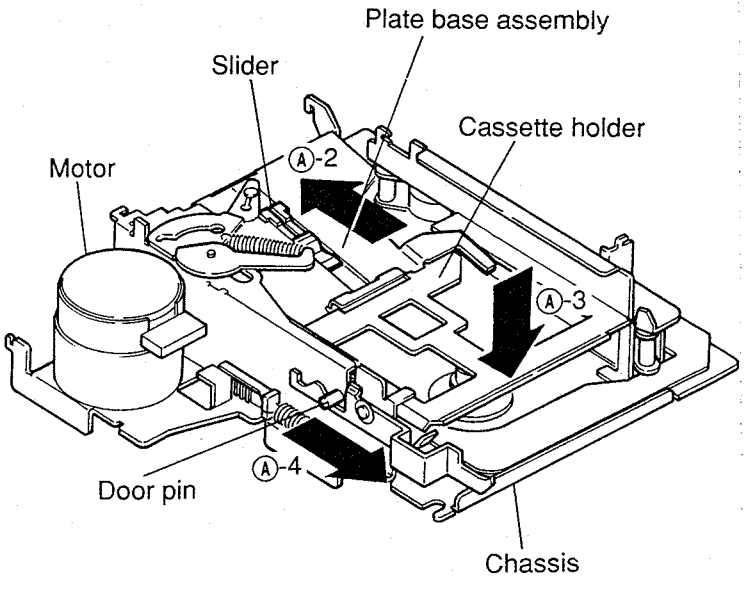


Figure 2

(14) Insert the jig into the hole Ⓐ-9 as shown in Figure and rotate the eject solenoid counterclockwise about 20 times, pulling it in the direction Ⓐ-10 with the finger.
Then the eject operation is completed.
Instead of operation (14), the eject operation can be performed by mounting the mechanism to the product. (Refer to Figures 4 and 5.)

Note: Do not reuse the used lock washers for mounting.
When turning the mechanism, be careful not to drop the gear and the flywheel.
Fasten the three screws with a fastening torque of 6 kg.cm.

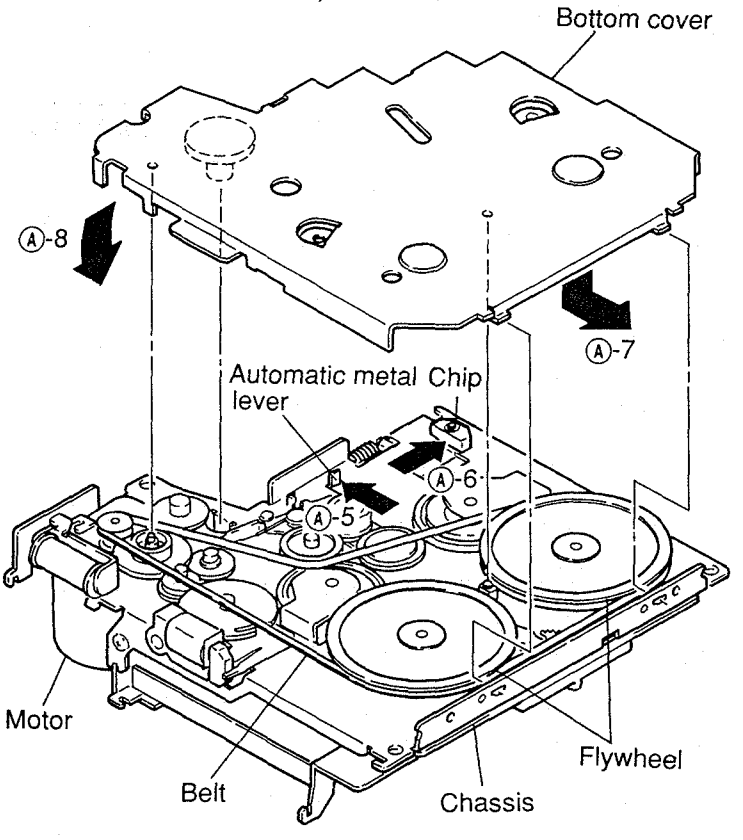


Figure 3

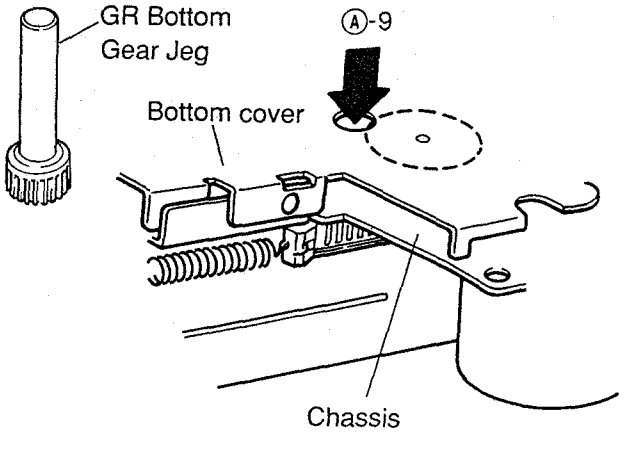


Figure 4

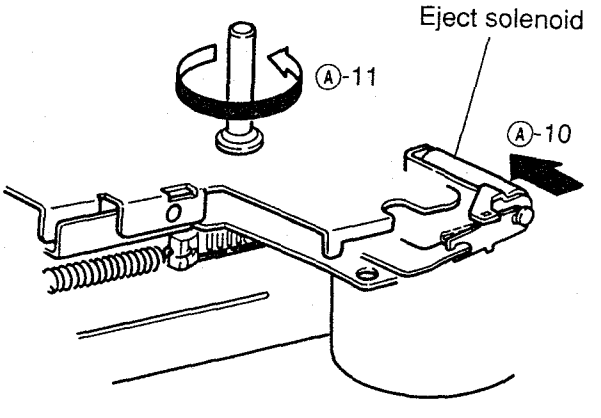


Figure 5

2. Replacement of the bottom cover mounting parts

a. Replacement of the eject gear
(1) Remove M1.2 lock washer ③ as shown in Figure 6.
(2) Pull the eject pinion out of the eject gear and remove the eject gear as shown in Figure 6.
(3) Apply the molykote E paste to the section Ⓑ-1, and mount the eject gear following the removal steps in the reverse order. After replacement is finished, make sure that the gear rotates smoothly. (Refer to Figure 6.)

Note: Do not reuse the used lock washers for remounting.
Take care to avoid damage by piercing and tearing.

b. Replacement of the RF solenoid
(1) Remove two solders ④ and remove the RF solenoid from the bottom cover by pulling it up as shown in Figure 6.
(2) Replace the solenoid with a new one, and remount it following the removal steps in the reverse order as shown in Figure 6.

Note: When removing solder ④, set the temperature of the soldering iron to 350° ± 10° and the soldering time to 1 – 3 seconds. Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damaged.

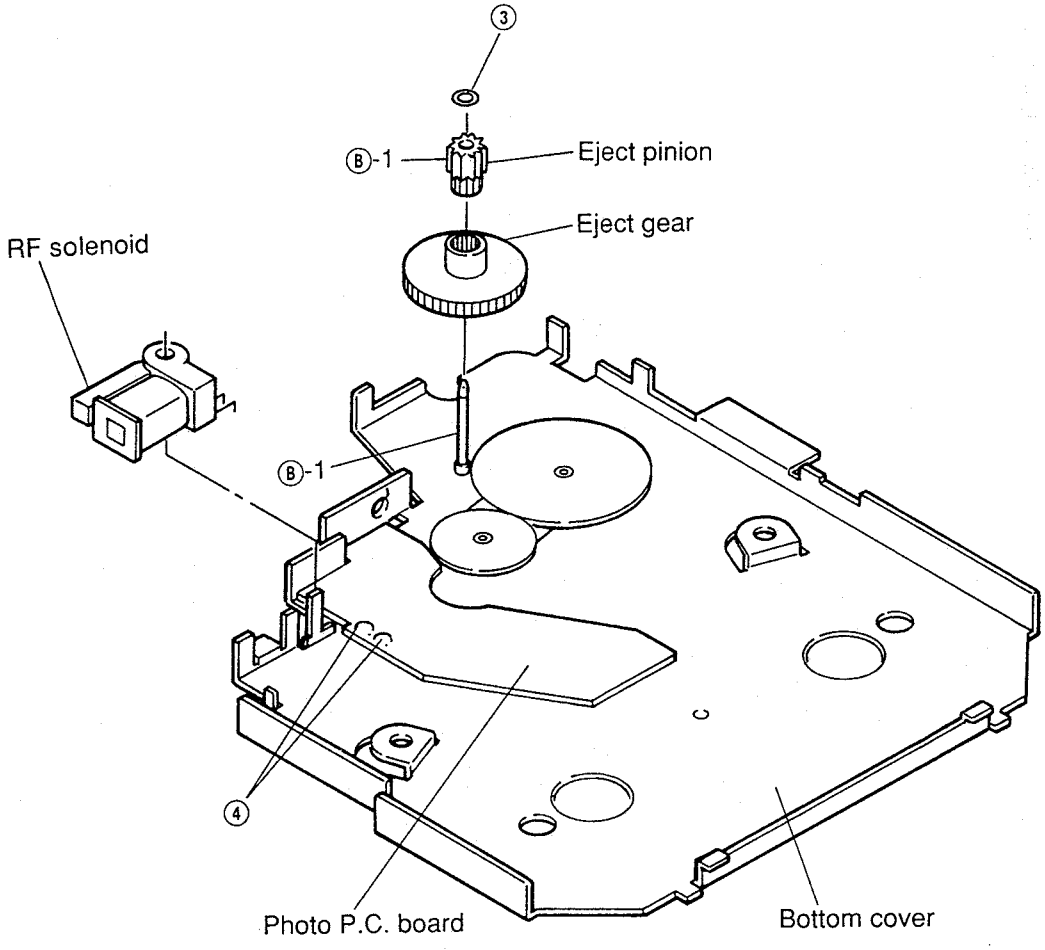


Figure 6

c. Replacement of the photo sensor
(1) Remove four solders ⑤ as shown in Figure 7.
(2) Remove the photo guide together with the photo sensor from the photo P.C. board as shown in Figure 7.
(3) Insert the new photo sensor into the photo guide, and bend the legs of the photo sensor in the direction marked Ⓑ-2 as shown in Figure 7.
(4) Insert the photo guide into the P.C. board and solder the legs so that the photo sensor is set as indicated by ⊏⊐ in Figure 7.

Note: When using the soldering iron, set the temperature of the soldering iron to 350° ± 10° and the soldering time to 1 – 3 seconds. Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damaged. Also take care that the photo guide is properly fixed and straight.

d. Replacement of the detector switch (Automatic metal pack-in)
(1) Remove 4 solders ⑥ with which the switch is fixed as shown in Figure 7.
(2) Prepare the terminals of the switch of the new solder as shown in Figure 8.
(3) After that, insert the switch into the photo P.C. board, and solder the terminals.

Note: When using the soldering iron, refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Also take care that the switch guide is properly fixed and straight.

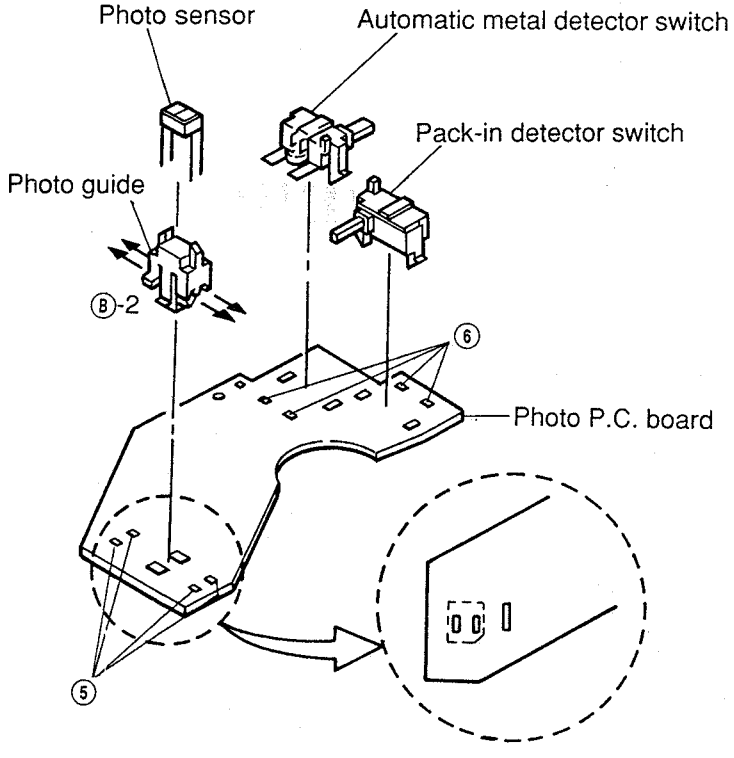


Figure 7

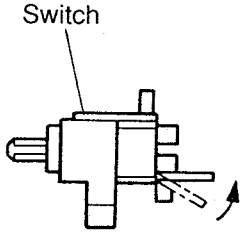


Figure 8

3. Replacement of the mounting parts on the rear of the main chassis

a. Replacement of the belt
(1) After removing the bottom cover, remove the belt.
(2) Clean the new belt with absolute alcohol, and fix it as shown in Figure 9.

Note: When fixing the belt, make sure that it is not twisted or dirty. When removing the belt, do not turn up the front of the chassis.

b. Replacement of the motor
(1) After removing the belt, remove spring ⑦ as shown in Figure 10.
(2) Remove solder ⑧-1, and remove the parallel wire (5P) from the control P.C. board as shown in Figure 11.
(3) Remove two screws ⑨ and ⑩, and remove the motor, taking care not to damage the motor idler gear. (Refer to Figure 10.)
(4) Mount the new motor following the removal steps in the reverse order.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Since the parallel wire is very easily damaged, handle it with care.
Fasten the two screws with a fastening torque of 3 kg.cm.

*When inserting the clutch spring, be careful of the inserting direction as shown in the Figure.

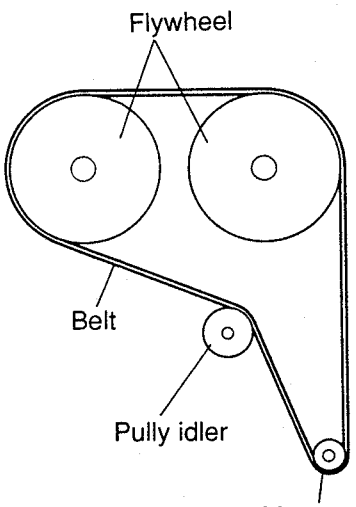


Figure 9

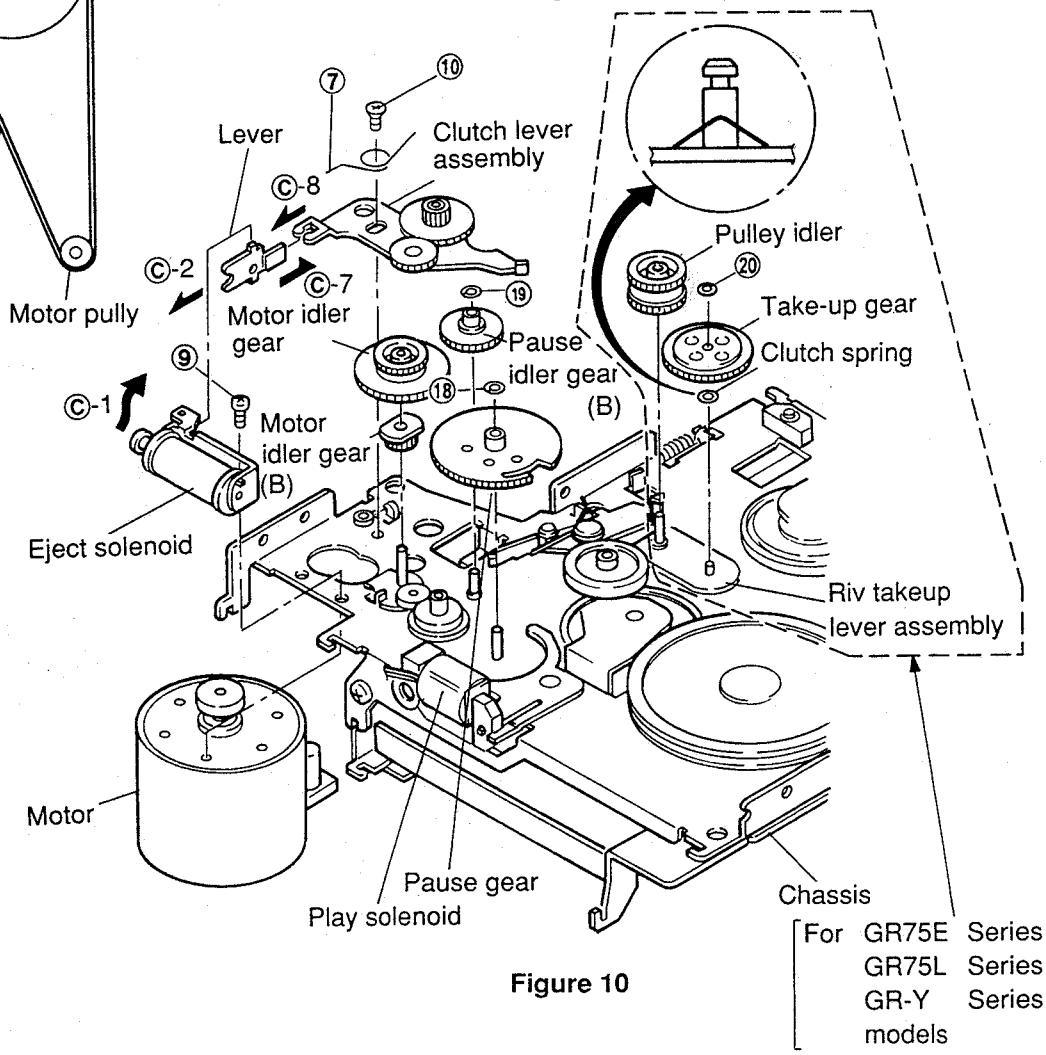


Figure 10

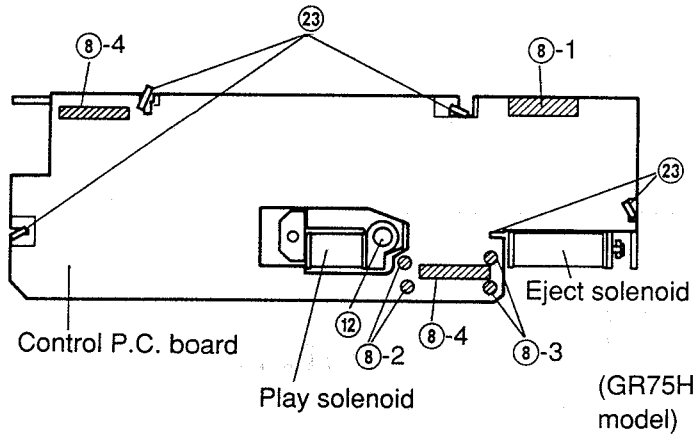
c. Replacement of the flywheels
(1) After removing the belt, pull out the two flywheels. Take care not to loose the polyslider washer ⑪ located between the flywheel and the chassis. (Refer to Figure 12.)
(2) Fix the polyslider washer to the new flywheel and mount the flywheel to the chassis.

d. Replacement of the play solenoid
(1) Remove the two solders ⑧-2 as shown in Figure 11.
(2) Remove one screw ⑫ and remove the solenoid as shown in Figure 11.
(3) Mount the new solenoid following the removal steps in the reverse order.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Fasten the screws with a fastening torque of 2.3 kg.cm.

e. Replacement of the eject solenoid
(1) Remove two solders ⑧-3. Take care not to loose the tube that protects the wire. (Refer to Figure 11.)
(2) Remove screw ⑨ and remove the solenoid as shown in Figure 10.
(3) Align position ©-1 of the new solenoid with position ©-2 of the lever and fasten the screw as shown in Figure 10.
(4) Lead the wire through the tube and solder it.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Fasten the screws with a fastening torque of 3 kg.cm. As the solenoid wires are not insulated, do not let them cross each other.



[For GR75E Series model]

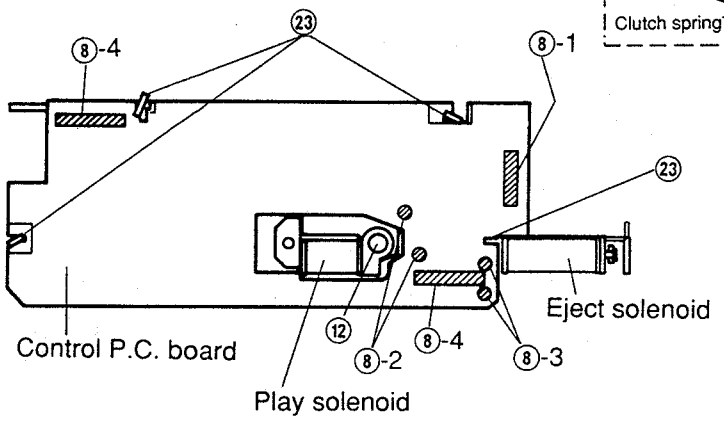


Figure 11

[For GR75L Series
GR-Y Series
GR75H Series models]

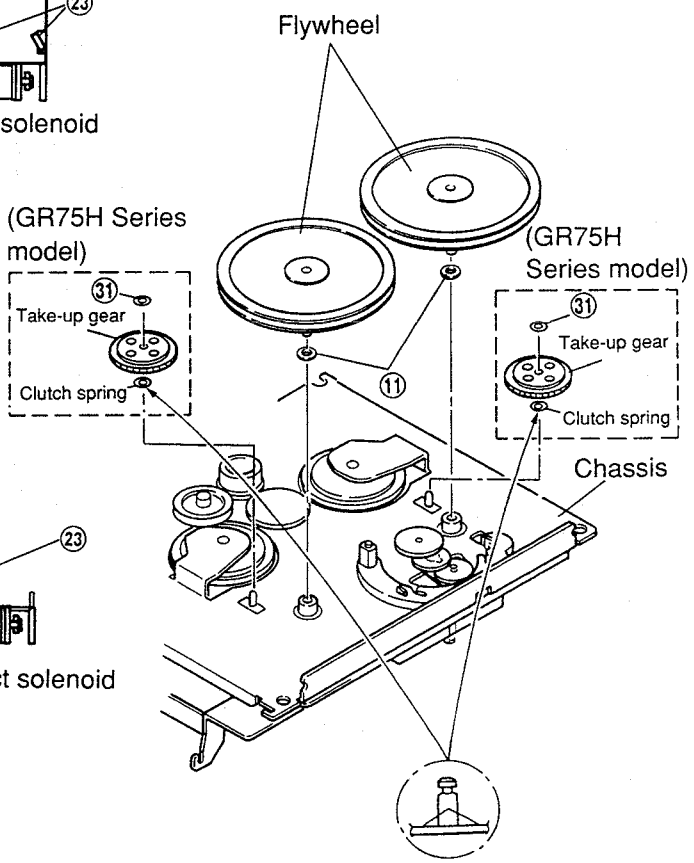


Figure 12

GR/GR-Y Series

f. Replacement of gears

(f-1) Replacement of the reverse idler gear
(1) Remove M1.2 lock washer ⑬, pull it up from the stud of the chassis and remove the gear as shown in Figure 13.
(2) Remount following the removal steps in the reverse order.

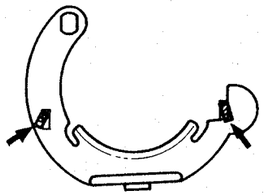
(f-2) Replacement of the sun gear
(1) Remove M1.2 lock washer ⑭, pull it up from the stud of the chassis and remove the gear as shown in Figure 13.
(2) Mount it, following the removal steps in the reverse order.

(f-3) Replacement of the fixing gear
(1) Adjust the two mounting claws for the fix gear on the chassis ⑮ and remove the section Ⓒ-3 of the gear by pulling it up in the direction of the arrow shown in Figure 13.
(2) Insert the section Ⓒ-4 of the new gear into the chassis, and mount it following the removal steps in the reverse order as shown in Figure 13.

(f-4) Replacement of the reverse lever assembly and planet gear
(1) Remove both the fixing gear and the sun gear and remove the reverse lever assembly as shown in Figure 13.
(2) Remove M1.7 lock washer ⑯ and remove the planet gear as shown in Figure 14.
(3) Mount the new planet gear and reverse lever following the removal steps in the reverse order.

Notes on f-1 through f-4:
After mounting all parts, check if the reverse lever moves in the directions marked Ⓒ-5 when the reverse gear is turned clockwise and counterclockwise.

*After mounting the fixing gear, bend the claws ⑮ into the form of as shown in the Figure.



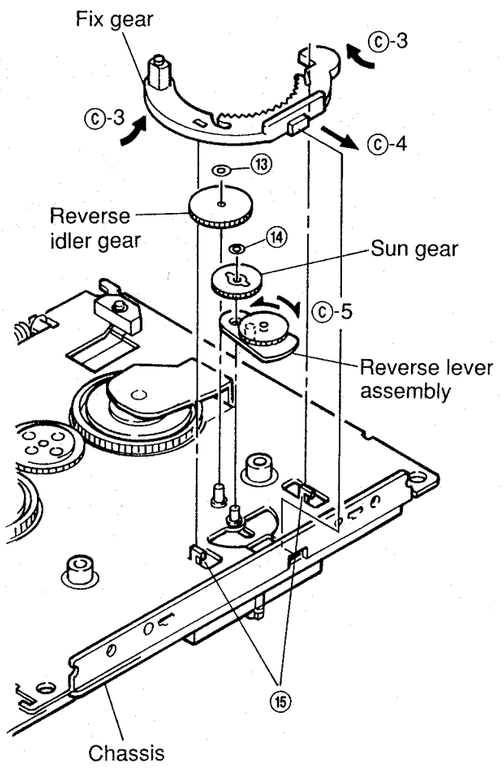


Figure 13

(f-5) Replacement of the clutch lever assembly and eject idler gear
(1) After removing the motor, remove the motor idler gear and the motor idler gear (B) and remove the clutch lever assembly as shown in Figure 10.
(2) Remove M1.2 lock washer ⑰ and remove the eject idler gear as shown in Figure 15.
(3) Mount the new gears and clutch lever following the removal steps in the reverse order.

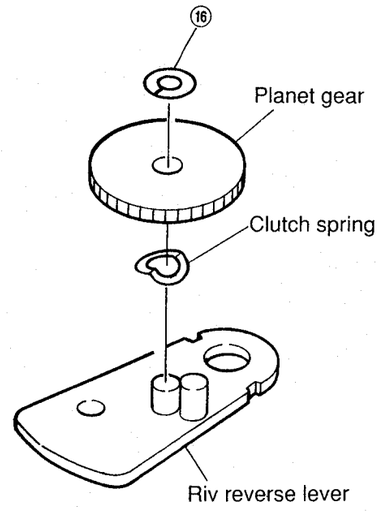
Note: When mounting the gears to the lever, apply grease (PG-671) to the position Ⓒ-6 as shown in Figure 15. Align the position Ⓒ-7 with the position Ⓒ-8 and mount the clutch lever as shown in Figures 10 and 15.

(f-6) Replacement of the pause gear
(1) Remove M1.2 lock washer ⑱ and remove the pause gear pulling it up from the stud of the chassis as shown in Figure 10.
(2) Mount the new gear following the removal steps in the reverse order.

(f-7) Replacement of the pause idler gear (B)
(1) After removing the motor and the motor idler gear, remove M1.2 lock washer ⑲ and remove the gear by pulling it up from the stud of the chassis as shown in Figure 10.
(2) Mount the new gear by following the removal steps in the reverse order.

(f-8) Replacement of the take-up gear
(1) After removing the belt and the pulley idler gear, remove M1.2 lock washer ⑳ by pulling it up from the stud of the riv take-up lever assembly as shown in Figure 10.
After removing the Flywheel, remove M1.2 lock washer ㉛ and remove the gear by pulling it up from the stud of the chassis as shown in figure 12. [For GR75H Series model]
(2) Remount the take-up gear following the removal steps in the reverse order.

Notes on f:
Do not reus e the used washers. Take care to avoid damage by piercing and tearing.



[Disassembly Reverse Lever Assembly]

Figure 14

Figure 15

4. Replacement of the parts mounted on the front of the main chassis

a. Replacement of the audio P.C. board
(1) Remove two solders ㉑ and remove the parallel wire (7P) and the head P.C. board as shown in Figure 16.
(2) Adjust the two claws ㉒ to the rectangular holes on the P.C. board and remove the P.C. board as shown in Figure 16.
(3) After replacement, mount the new P.C. board following the removal steps in the reverse order.

Note: The head P.C. board and the parallel wire are easily damaged. Handle them with care. Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Do not bring the soldering iron near the head P.C. board.

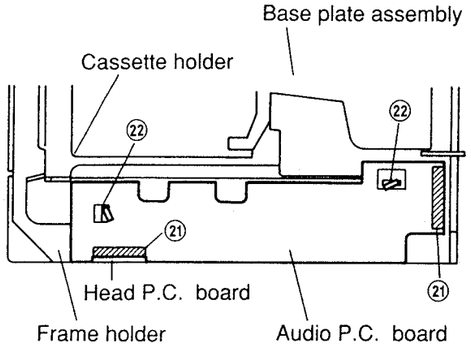


Figure 16

b. Replacement of the control P.C. board
(1) Remove seven solders ⑧ and remove the three parallel wires and the wires of the eject solenoid and of the play solenoid as shown in Figure 11.
(2) Remove five claws ㉓ and remove the P.C. board as shown in Figure 11. [For GR75E Series model] Remove four claws ㉓ and remove the P.C. board as shown in Figure 11. [For GR75L Series, GR-Y Series, GR75H Series models]
(3) After replacing the old P.C. board with a new one, mount it following the removal steps in the reverse order.

Note: As mentioned in Item 4-a, handle the parallel wires carefully, and be sure that the temperature of the soldering iron and the soldering time are proper. As the wires of the eject solenoid are not insulated, do not let them cross each other.

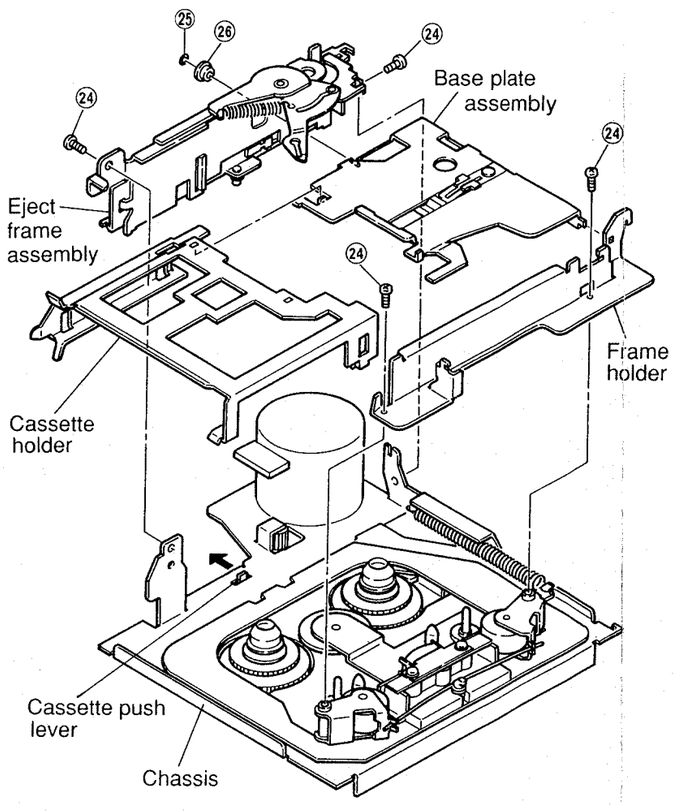


Figure 17

c. Disassembly and assembly of the cassette holder
(1) Remove four screws ㉔ and remove the eject frame assembly and the frame holder as shown in Figure 17.
(2) Remove M1.2 lock washer ㉕ and plate base roller ㉖ and remove the cassette holder and the base plate assembly as shown in Figure 17.
(3) Remount them following the removal steps in the reverse order.

Notes: 1. When mounting the cassette holder and the base plate, insert the slider shaft into the eject arm and fix them turning the slider shaft in the direction indicated by the arrow in the figure. Make sure that the cassette holder and the base plate are in the cassette-in mode during this operation. (Refer to Figure 18).
2. When mounting the eject frame assembly, push the cassette push lever in the direction indicated by the arrow in the Figure 17.
3. When mounting the base plate assembly and the eject frame assembly, or when mounting the eject frame assembly to the chassis, do not apply excessive force to avoid deformations of the eject arm and the frame.
4. Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

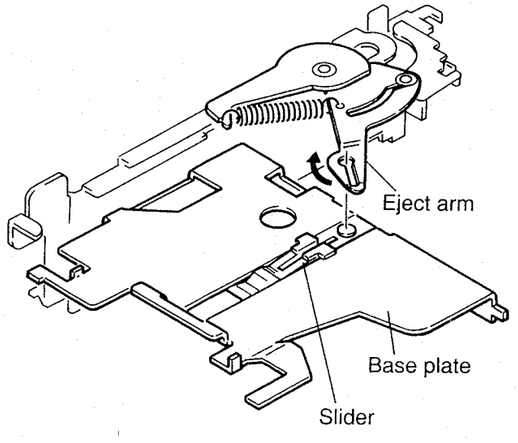


Figure 18

d. Replacement of the reels
(1) Remove M1.7 two lock washers ㉖ (Refer to figure 19).
(2) Move the select lever in the direction marked Ⓓ-1 in the Figure and remove the reel by gripping the reel gear as shown in Figure 19.
(3) After replacement, mount the new reels following the removal steps in the reverse order.
(4) After mounting, check the tape speed and the wow and flutter with test tape MTT-111.

Note: Since the reel is easily loosened if the cap is gripped, always handle it gripping the gear. Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

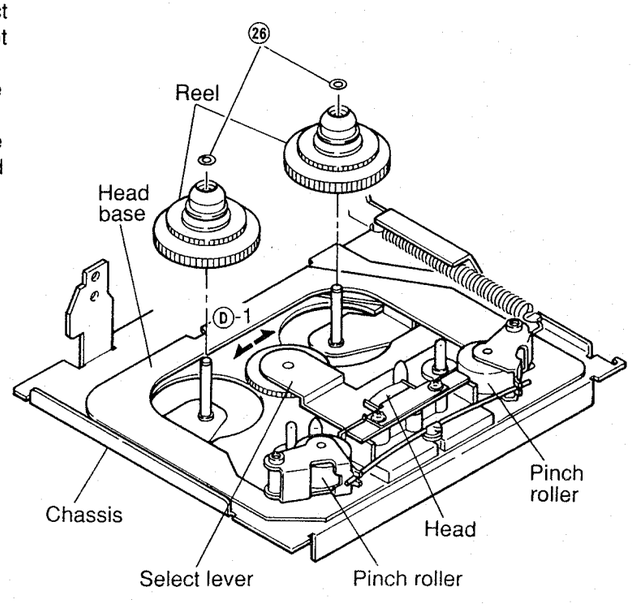


Figure 19

e. Replacement of the pinch rollers

(1) Remove pinch roller spring ㉗ as shown in Figure 20.
(2) Remove M3.1 two lock washers ㉘ and remove the pinch roller as shown in Figure 20.
(3) Mount the pinch rollers following the removal steps in the reverse order.
Apply insulation coating to the position Ⓓ-2 of the pinch roller as shown in Figure 20.

Note: Make sure that the pinch rollers are thoroughly fixed and that they are not deformed. Do not reuse used lock washers. Take care to avoid damage by piercing and tearing.

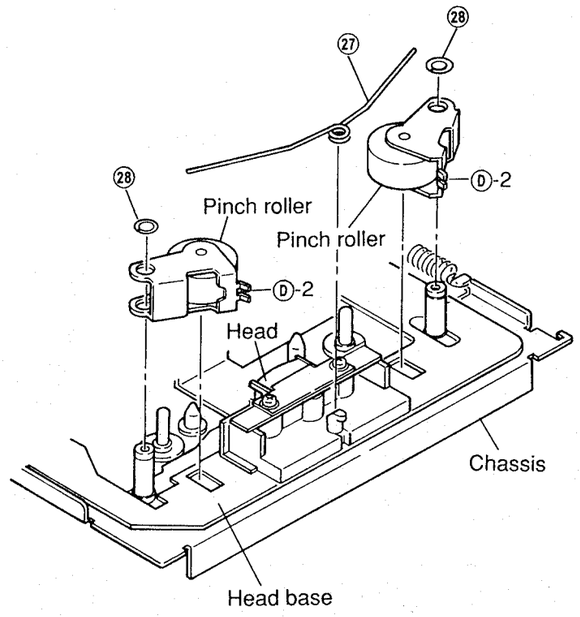


Figure 20

f. Replacement of the head

(1) After removing the pinch roller spring, remove two screws ㉙ as shown in Figure 21.
(2) Remove solder ㉚ and remove the head from the head P.C. board as shown in Figure 22.
(3) After replacement, mount the new head following the removal steps in the reverse order.

Notes: 1. Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Do not bring the soldering iron near the head P.C. board. Make sure that the head P.C. board is not lifted.
2. Fasten the two screws with a fastening torque of 2.3 kg.cm. Note that the tension of the head spring can be decreased if the screws are fastened too strongly.

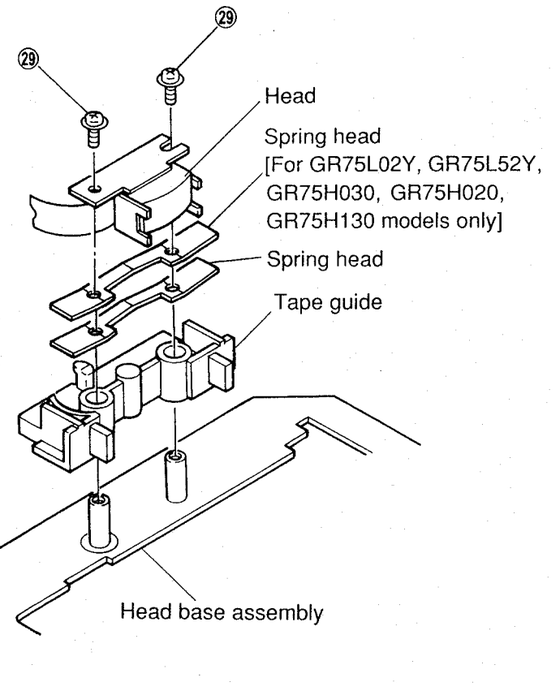


Figure 21

(4) Adjust the height of the head as shown in Figures 23, 24 and 25.
① Place the height adjustment gauge (AI-500) on the head base, and adjust the height so that the check bar fits in the tape head guide smoothly.
② When the check bar touches the top (or bottom) of the tape guide, insert a spacer (t 0.1 mm or polislider washer t 0.13 mm).
If necessary, remove the spacer.

Note: If you do not have a height gauge like described in (4)-①, run the tape at normal speed and adjust the height of the head and the tape head guide so that the tape does not curl.

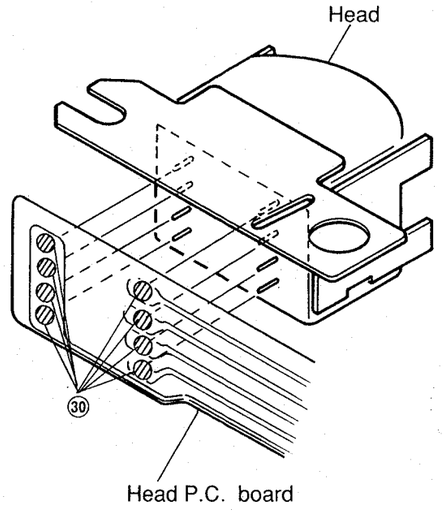


Figure 22

(5) After having assembled the complete mechanism, adjust the angle of the head with test tape MTT-113C. (Refer to chapter "Adjustment of the head angle".) After the adjustment, apply the screw lock and fix the screws.

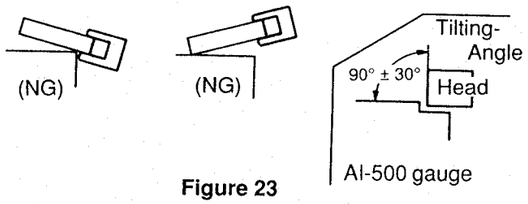


Figure 23

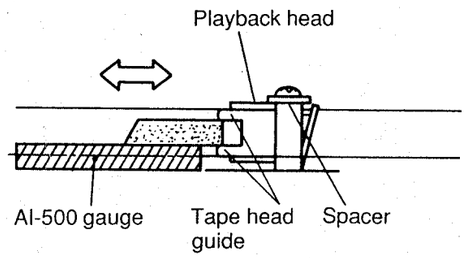
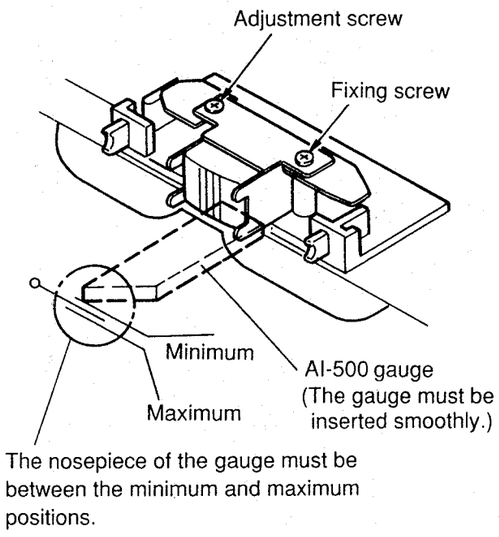


Figure 24

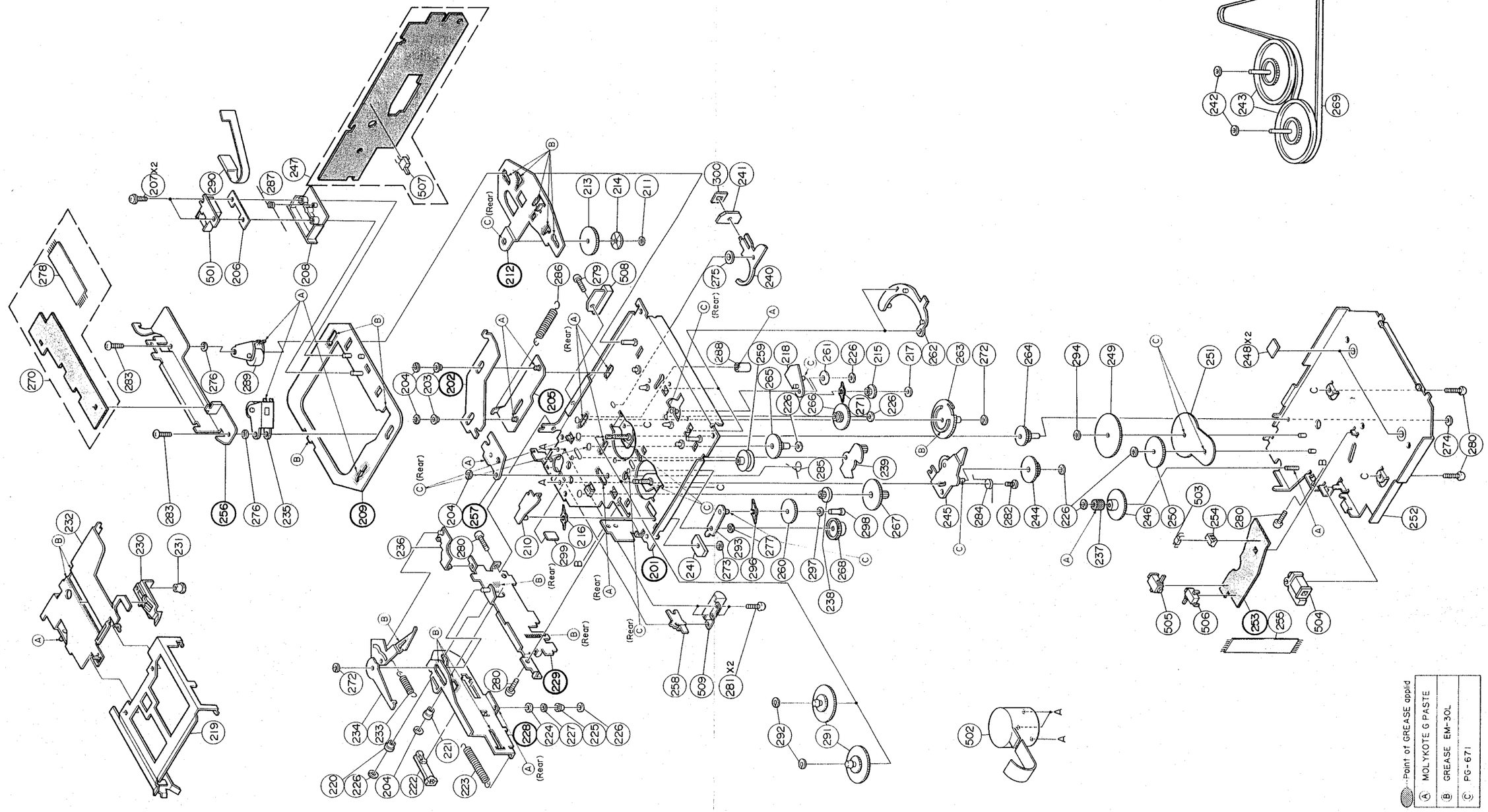


The nosepiece of the gauge must be between the minimum and maximum positions.

Figure 25

Exploded View (GR75E Series) (1/4)

● For GR75E010/01A/020 Models



Cassette Deck Assembly Parts List (GR75E Series) (1/4)

	Symbol No.	IN-dex	Part No.	Description
	203	3-C	43A11072W01	Roller, Sub Head
	204		04B41345P01	Washer, Lock(M1.2)
	206	2-B	41A31756W01	Spring, Head
	207	2-B	03S40019G03	Screw, F-Locks(M2x4)
	208	2-B	43B12545W01	Tape, Guide
	210	4-C	01A10206W01	Assy., Riv Lever R/F Sol
	211	2-D	04B41345P29	Washer, Lock(M2.6)
	213	2-D	44A10295W01	Gear, Sensor
	214	2-D	14A10681W01	Reflector
	215	3-E	44A30480W01	Gear, Planet
	216	3-E	41A10097W02	Spring, Clutch
	217	3-E	04B41345P35	Washer, Lock(M1.7)
	218	3-E	01A30824W01	Assy., Riv Lever Reverse
●	219	4-B	07B40283W01	Holder, Cassette
■	219	4-B	07B40283W01	Holder, Cassette
▲	219	4-B	07B10074W01	Holder, Cassette
	220	5-B	43A12583W01	Roller, Eject
	221	5-C	43A63281P01	Roller, Plate Base
	222	5-C	44A82206P01	Rack
	223	5-C	41B10386W03	Spring, GR(Rack)
	224	4-C	43A10121W01	Roller, Eject A
	225	4-D	43A10360W01	Roller, Eject B
	226		04B41345P11	Washer, Lock(M1.2)
	227	4-D	43A12377W01	Roller, Eject C
	230	4-A	45B10376W01	Slider
	231	4-B	47A63278P01	Shaft, Slider
	232	4-A	01A10212W01	Assy..Riv Plate Base
	233	4-C	41B10386W01	Spring, Eject Arm
	234	4-B	01A10148W01	Assy., Riv Eject Arm A
	235	3-B	01B30863W02	Assy., Pinch Roller
	236	4-C	45A10087W01	Lever Pack In SW
	237	4-F	44A12975W01	Pinion, Eject
	238	4-E	44A13617W01	Gear, Motor Idler(B)
	239	3-E	01A10201W02	Assy., Riv Lever Pause
	240	2-D	45A40725W01	Lever, Play Sol
	241		76T10374W01	Chip
	242	1-G	04S40075G05	Washer Polyslider (M2.1)
	243	1-G	01A10368W01	Assy., Flywheel
	244	3-F	44A10141W01	Gear, Eject Idler
	245	3-E	01A10205W02	Assy., Riv Lever Clutch A

Notes: ● ; For GR75E020 model only ■ ; For GR75E010 model only
▲ ; For GR75E01A model only Others ; Common

Note : The parts without parts list are not supplied.

	Symbol No.	IN-dex	Part No.	Description
	246	3-F	44A10145W01	Gear, Eject
	247	2-B	01V11500W18	Assy., GR Control P.C. Board
	248	3-G	43A41656W01	Spacer, UHMW
	249	3-F	44A11063W01	Gear, Bottom A
	250	3-F	44A11064W01	Gear, Bottom B
	251	3-G	34A11122W02	Washer, GR
	252	3-H	01A10210W02	Assy., Riv. Cover Bottom
	254	3-G	15B11065W01	Guide, Photo
	255	4-G	30T15126W01	Wire, PC Sensor(7P)
	258	4-D	45A10101W01	Lever, Eject Sol
	259	3-D	49A10131W01	Pulley, Idler
	260	4-E	44A10133W01	Gear, Take Up
	261	3-E	44A10134W01	Gear, Sun
	262	3-E	44B10135W01	Gear, Fix
	263	3-E	44B30484W01	Gear, Pause
	264	3-F	44A10137W01	Gear, Pause Idler A
	265	3-D	44A10379W01	Gear, Pause Idler B
	266	3-E	44A10138W01	Gear, Reverse Idler
	267	3-E	44A10139W01	Gear, Motor Idler
	268	4-E	44A11062W01	Gear, Reel Idler
	269	1-G	42A10380W01	Belt, GR
●	270	3-A	01V14700W68	Assy., GR Audio P.C. Board
■	270	3-A	01V11500W19	Assy., GR Audio P.C. Board
▲	270	3-A	01V11500W19	Assy., GR Audio P.C. Board
	271	3-E	41A30475W01	Spring, Clutch
	272		04B41345P15	Washer, Lock(M1.2)
	273	4-D	04B41345P02	Washer, Lock(M1.7)
	274	3-H	04B41345P17	Washer, Lock(M1)
	275	2-D	04B41345P30	Washer, Lock(M3.1)
	276		04B41345P32	Washer, Lock(M3.1)
	277	4-E	04B41345P37	Washer, Lock(M2.1)
	278	2-A	30T15126W02	Wire, PC Joint 7P
	279	2-D	03S44205G78	Screw, Pan(M2x6)
	280		03S44205G30	Screw, Pan(M2.6x4)
	281	4-D	03S72235F53	Screw, Pan(M2x3.3)
	282	3-F	03A12132W02	Screw, Eject Clutch (M2x2.3)
	283		03S43997P64	Screw, Pan(M1.7x3)
	284	3-F	41A10384W01	Spring, Eject Clutch
	285	3-E	41A10385W01	Spring, Cas Push
	286	2-C	41B10386W02	Spring, Sub Head

	Symbol No.	IN-dex	Part No.	Description
	287	2-B	41A10387W01	Spring, Pinch Roller
	288	3-D	43A12719W01	Roller, Pause
	289	3-B	01B30863W01	Assy., Pinch Roller
	290	2-B	84T25151W01	Head P.C. Board
	291	4-E	01T35403W01	Assy., Reel
	292	4-E	04B41345P12	Washer, Lock(M1.7)
	293	4-D	01A30161W01	Assy., Riv Lever Take Up
	294	3-F	04B41345P34	Washer Lock(M1.2)
	296	4-D	41A40910W01	Spring, Clutch
	297	4-E	43A41543W01	Washer, Som(M1.2)
	298	3-E	47A41458W01	Pin, Take Up
	299	4-C	43A40388W01	Spacer, Polyslider
	300	2-D	43A41744W01	Lock, Solenoid

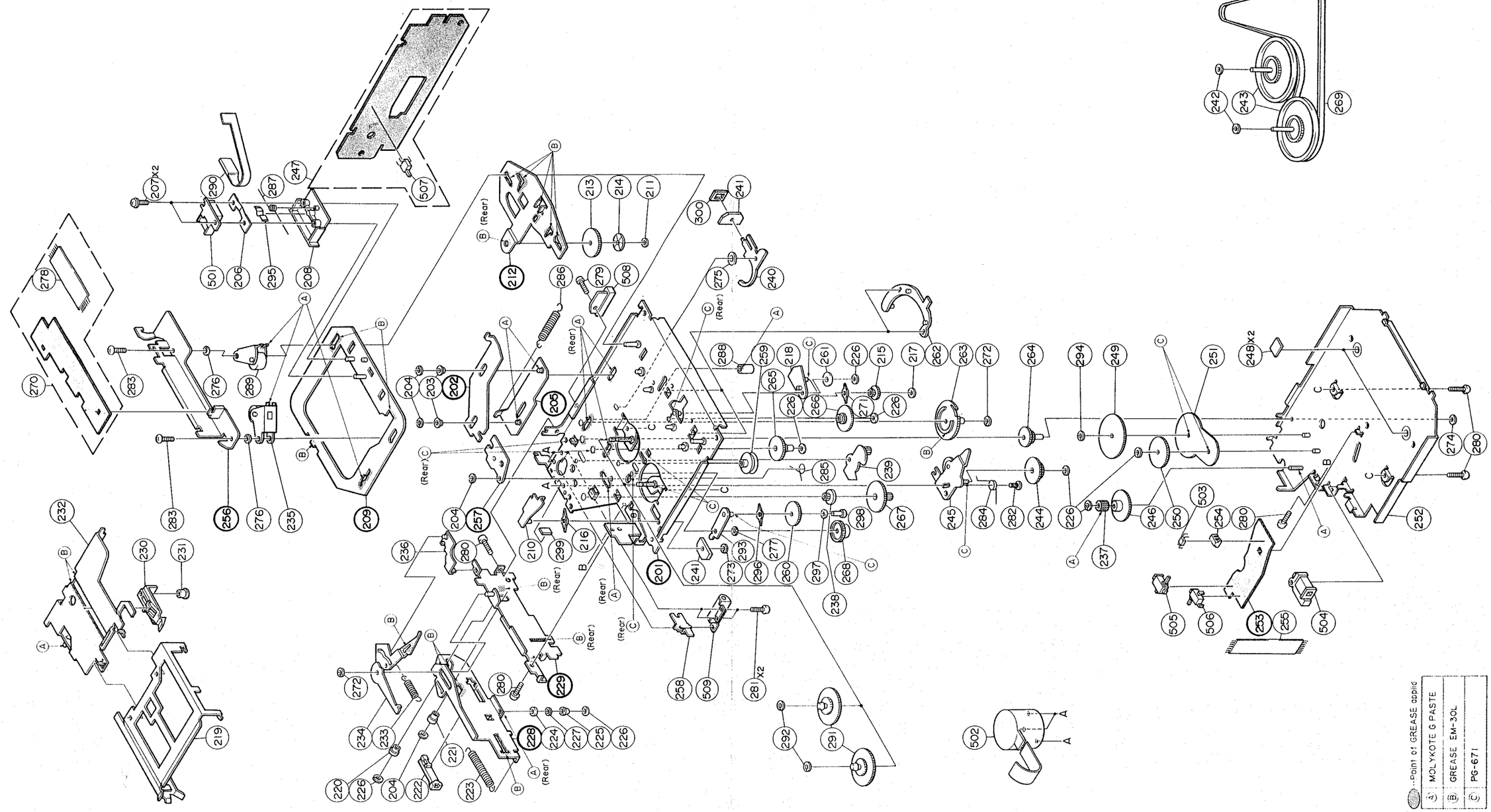
Miscellaneous

●	501	2-B	88T15971W01	Head
■	501	2-B	88T10373W01	Head
▲	501	2-B	88T10373W01	Head
	502	4-E	01V11500W64	Assy., Motor(Main, 13.2V-80mA)
	503	3-G	51T15144W01	Sensor, Photo
	504	4-G	01T10371W01	R/F Sol. Assy.
	505	4-F	40T15382W01	SW., Detector (Pack Down)
	506	4-G	40T15382W01	SW., Detector(Metal)
	507	2-C	40T15222W01	SW., Detector (Pack In)
	508	2-D	01T15249W01	Assy., Play Solenoid
	509	4-D	01T10369W02	Assy., Eject Solenoid

Notes: ● ; For GR75E020 model only ■ ; For GR75E010 model only
▲ ; For GR75E01A model only Others ; Common

Exploded View (GR75L Series) (2/4)

● For GR75L020/02A Models



Cassette Deck Assembly Parts List (GR75E Series) (2/4)

Note : The parts without parts list are not supplied.

Symbol No.	IN-dex	Part No.	Description
203	3-C	43A11072W01	Roll, Sub Head
204		04B41345P01	Washer, Lock(M1.2)
206	2-B	41A31756W01	Spring, Head
207	2-B	03S40019G03	Screw, F-Locks(M2x4)
208	2-B	43B12545W01	Tape, Guide
210	4-C	01A10206W01	Assy., Riv Lever R/F Sol.
211	2-D	04B41345P29	Washer, Lock(M2.6)
213	2-D	44A10295W01	Gear, Sensor
214	2-D	14A10681W01	Reflector
215	3-E	44A30480W01	Gear, Planet
216	3-E	41A10097W02	Spring, Clutch
217	3-E	04B41345P35	Washer, Lock(M1.7)
218	3-E	01A30824W01	Assy., Riv Lever Reverse
219	4-B	07B40283W01	Holder, Cassette
220	5-B	43A12583W01	Roller, Eject
221	5-C	43A63281F01	Roller, Plate Base
222	5-C	44A82206P01	Rack
223	5-C	41B10386W03	Spring, GR(Rack)
224	4-C	43A10121W01	Roller, Eject(A)
225	4-D	43A10360W01	Roller, Eject(B)
226		04B41345P11	Washer, Lock(M1.2)
227	4-D	43A12377W01	Roller, Eject(C)
230	4-A	45B10376W01	Slider
231	4-B	47A63278F01	Shaft, Slider
232	4-A	01A10212W01	Assy., Riv Plate Base
233	4-C	41B10386W01	Spring, Eject Arm
234	4-B	01A21754W01	Assy., Riv Eject Arm(A)
235	3-B	01B30863W02	Assy., Pinch Roller
236	4-C	45A10087W01	Lever, Pack In SW.
237	4-F	44A20314W01	Pinion, Eject
238	4-E	44A13617W01	Gear, Motor Idler(B)
239	3-E	01A10201W02	Assy., Riv Lever Pause
240	2-E	45A40725W01	Lever, Play Sol
241		76T10374W01	Chip
242	1-G	04S40075G05	Washer, Polyslider (M2.1)
243	1-G	01A10368W01	Assy., Flywheel
244	3-F	44A10141W01	Gear, Eject Idler
245	3-E	01A10205W02	Assy., Riv Lever Clutch(A)
246	3-F	44A10145W01	Gear, Eject
247	2-B	01V23700W03	Assy., GR Control P.C. Board
248	3-G	43A41656W01	Spacer, UHMW
249	3-F	44A11063W01	Gear, Bottom(A)
250	3-F	44A11064W01	Gear, Bottom(B)
251	3-G	34A11122W02	Washer, GR
252	3-H	01A10210W02	Assy., Riv. Cover Bottom
254	3-G	15B11065W01	Guide, Photo
255	4-G	30T15126W01	Wire, PC Sensor(7P)
258	4-D	45A10101W01	Lever, Eject Sol.
259	3-D	49A10131W01	Pulley, Idler
260	4-E	44A10133W01	Gear, Take Up
261	3-E	44A10134W01	Gear, Sun
262	3-E	44B10135W01	Gear, Fix
263	3-E	44B21670W01	Gear, Pause
264	3-F	44A10137W01	Gear, Pause Idler(A)
265	3-D	44A10379W01	Gear, Pause Idler(B)
266	3-E	44A10138W01	Gear, Reverse Idler
267	3-E	44A10139W01	Gear, Motor Idler
268	4-E	44A11062W01	Gear, Reel Idler
269	1-G	42A10380W01	Belt, GR
270	3-A	01V14700W68	Assy., GR Audio P.C. Board
271	3-E	41A30475W01	Spring, Clutch
272	3-F	04B41345P15	Washer, Lock(M1.2)
273	4-D	04B41345P02	Washer, Lock(M1.7)
274	3-H	04B41345P17	Washer, Lock(M1)
275	2-D	04B41345P30	Washer, Lock(M3.1)
276		04B41345P32	Washer, Lock(M3.1)
277	4-E	04B41345P37	Washer, Lock(M2.1)
278	2-A	30T15126W02	Wire, PC Joint 7P
279	2-D	03S44205G78	Screw, Pan(M2x6)
280		03S44205G30	Screw, Pan(M2.6x4)
281	4-D	03S72235F53	Screw, Pan(M2x3.3)
282	3-F	03A12132W02	Screw, Eject Clutch (M2x2.3)
283		03S43997P64	Screw, Pan(M1.7x3)
284	3-F	41A10384W01	Spring, Eject Clutch
285	3-E	41A10385W01	Spring, Cas. Push
286	2-C	41B10386W02	Spring, Sub Head
287	2-B	41A10387W01	Spring, Pinch Roller
288	3-D	43A12719W01	Roller, Pause
289	3-B	01B30863W01	Assy., Pinch Roller
290	2-B	84T25151W01	Head P.C. Board
291	4-E	01T35403W02	Assy., Reel
292	4-E	04B41345P12	Washer, Lock(M1.7)
293	4-D	01A30161W01	Assy., Riv Lever Take Up
294	3-F	04B41345P34	Washer, Lock(M1.2)
295	2-B	26A20537W01	Shield, Plate
296	4-D	41A40910W01	Spring, Clutch
297	4-E	43A41543W01	Washer, Som(M1.2)
298	3-E	47A41458W01	Pin, Take Up
299	3-D	43A40388W01	Spacer, Polyslider
300	2-D	43A41744W01	Lock, Solenoid

Miscellaneous

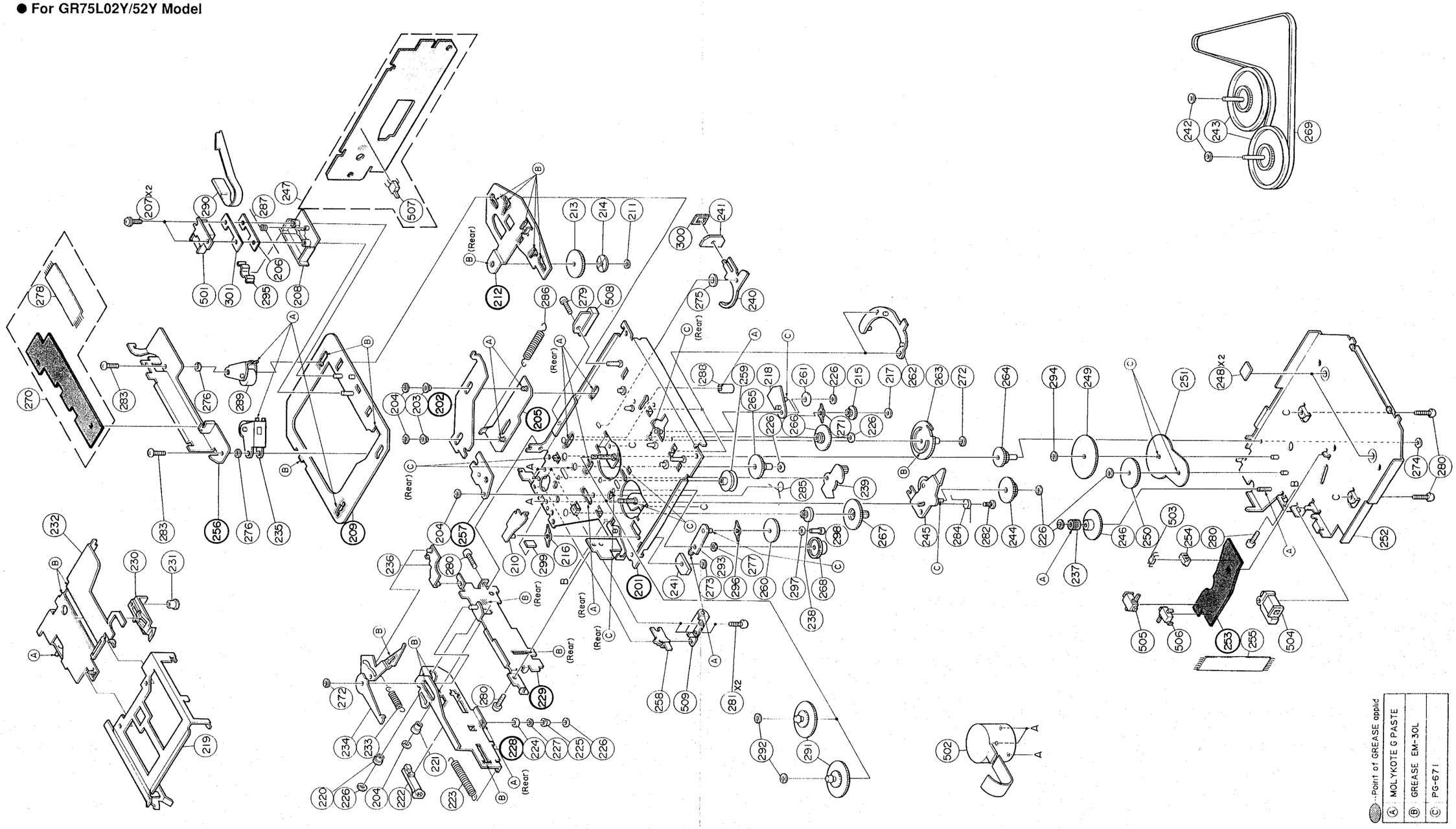
Symbol No.	IN-dex	Part No.	Description
501	2-B	88T15971W01	Head
◆ 502	4-E	01V23900W60	Assy., Motor(13.2V-105mA)
○ 502	4-E	01V43400W37	Assy., Motor(13.2V-88mA)
503	3-G	51T15144W01	Sensor, Photo
504	4-G	01T10371W01	R/F Sol. Assy
505	4-F	40T15382W01	SW., Detector (Pack Down)
506	4-G	40T15382W01	SW., Detector (Metal)
507	2-C	40T15222W01	SW., Detector (Pack In)
508	2-D	01T15249W01	Assy., Play Solenoid
509	4-D	01T10369W02	Assy., Eject Solenoid

Notes : ◆ ; For GR75L020 model only ○ ; For GR75L02A model only
Others ; Common

Notes : ◆ ; For GR75L020 model only ○ ; For GR75L02A model only
Others ; Common

Exploded View (GR-Y Series) (3/4)

● For GR75L02Y/52Y Model



Cassette Deck Assembly Parts List (GR-Y Series) (3/4)

Note : The parts without parts list are not supplied.

Symbol No.	IN-dex	Part No.	Description
203	3-C	43A11072W01	Roll, Sub Head
204		04B41345P01	Washer, Lock(M1.2)
206	2-B	41A31756W01	Spring, Head
207	2-B	03S40019G03	Screw, F-Locks(M2x4)
208	2-B	43B12545W01	Tape, Guide
210	4-C	01A10206W01	Assy., Riv Lever R/F Sol.
211	2-D	04B41345P29	Washer, Lock(M2.6)
213	2-D	44A10295W01	Gear, Sensor
214	2-D	14A10681W01	Reflector
215	3-E	44A30480W01	Gear, Planet
216		41A10097W02	Spring, Clutch
217	3-E	04B41345P35	Washer, Lock(M1.7)
218	3-E	01A30824W01	Assy., Riv Lever Reverse
219	4-B	07B40283W01	Holder, Cassette
220	5-B	43A12583W01	Roller, Eject
221	5-C	43A63281F01	Roller, Plate Base
222	5-C	44A82206F01	Rack
223	5-C	41B10386W03	Spring, GR(Rack)
224	4-C	43A10121W01	Roller, Eject(A)
225	4-D	43A10360W01	Roller, Eject(B)
226		04B41345P11	Washer, Lock(M1.2)
227	4-D	43A12377W01	Roller, Eject(C)
230	4-A	45B10376W01	Slider
231	4-B	47A63278F01	Shaft, Slider
232	4-A	01A10212W01	Assy., Riv Plate Base
233	4-C	41B10386W01	Spring, Eject Arm
234	4-B	01A21754W01	Assy., Riv Eject Arm(A)
235	3-B	01B30863W02	Assy., Pinch Roller
236	4-C	45A10087W01	Lever, Pack In SW.
237	4-F	44A20314W01	Pinion, Eject
238	4-E	44A13617W01	Gear, Motor Idler(B)
239	3-E	01A10201W02	Assy., Riv Lever Pause
240	2-D	45A40725W01	Lever, Play Sol.
241		76T10374W01	Chip
242	1-G	04S40075G05	Washer, Polyslider (M2.1)
243	1-G	01A10368W01	Assy., Flywheel
244	3-F	44A10141W01	Gear, Eject Idler
245	3-E	01A10205W02	Assy., Riv Lever Clutch(A)
246	3-F	44A10145W01	Gear, Eject
☆ 247	2-B	01V23700W03	Assy., GR Control P.C. Board

Symbol No.	IN-dex	Part No.	Description
◇ 247		01V44200W74	Assy., GR Control P.C. Board
248	3-G	43A41656W01	Spacer, UHMW
249	3-F	44A11063W01	Gear, Bottom(A)
250	3-F	44A11064W01	Gear, Bottom(B)
251	3-G	34A11122W02	Washer, GR
252	3-H	01A10210W02	Assy., Riv. Cover Bottom
254	3-G	15B11065W01	Guide, Photo
255	4-G	30T15126W01	Wire, PC Sensor(7P)
258	4-D	45A10101W01	Lever, Eject Sol.
259	3-D	49A10131W01	Pulley, Idler
260	4-E	44A10133W01	Gear, Take Up
261	3-E	44A10134W01	Gear, Sun
262	3-E	44B10135W01	Gear, Fix
263	3-E	44B21670W01	Gear, Pause
264	3-F	44A10137W01	Gear, Pause Idler(A)
265	3-D	44A10379W01	Gear, Pause Idler(B)
266	3-E	44A10138W01	Gear, Reverse Idler
267	3-E	44A10139W01	Gear, Motor Idler
268	4-E	44A11062W01	Gear, Reel Idler
269	1-G	42A10380W01	Belt, GR
270	3-A	01V33300W03	Assy., GR Audio P.C. Board
271	3-E	41A30475W01	Spring, Clutch
272	3-F	04B41345P15	Washer, Lock(M1.2)
273		04B41345P02	Washer, Lock(M1.7)
274	3-H	04B41345P17	Washer, Lock(M1)
275	2-D	04B41345P30	Washer, Lock(M3.1)
276	3-B	04B41345P32	Washer, Lock(M3.1)
277	4-E	04B41345P37	Washer, Lock(M2.1)
278	2-A	30T15126W02	Wire, PC Joint 7P
279	2-D	03S44205G78	Screw, Pan(M2x6)
280		03S44205G30	Screw, Pan(M2.6x4)
281	4-D	03S72235F53	Screw, Pan(M2x3.3)
282	3-F	03A12132W02	Screw, Eject Clutch (M2x2.3)
283		03S43997P64	Screw, Pan(M1.7x3)
284	3-F	41A10384W01	Spring, Eject Clutch
285	3-E	41A10385W01	Spring, Cas. Push
286	2-C	41B10386W02	Spring, Sub Head
287	2-B	41A10387W01	Spring, Pinch Roller
288	3-D	43A12719W01	Roller, Pause
289	3-B	01B30863W01	Assy., Pinch Roller
290	2-B	84T35271W01	Head P.C. Board

Symbol No.	IN-dex	Part No.	Description
291	4-E	01T35403W02	Assy., Reel
292	4-E	04B41345P12	Washer, Lock(M1.7)
293	4-D	01A30161W01	Assy., Riv Lever Take Up
294	3-F	04B41345P34	Washer, Lock(M1.2)
295	2-B	26A20537W01	Shield, Plate
296	4-D	41A40910W01	Spring, Clutch
297	4-E	43A41543W01	Washer, Som(M1.2)
298	3-E	47A41458W01	Pin, Take Up
299	3-C	43A40388W01	Spacer, Polyslider
300	2-D	43A41744W01	Lock, Solenoid
301	2-B	41A41416W01	Spring, Head

Miscellaneous

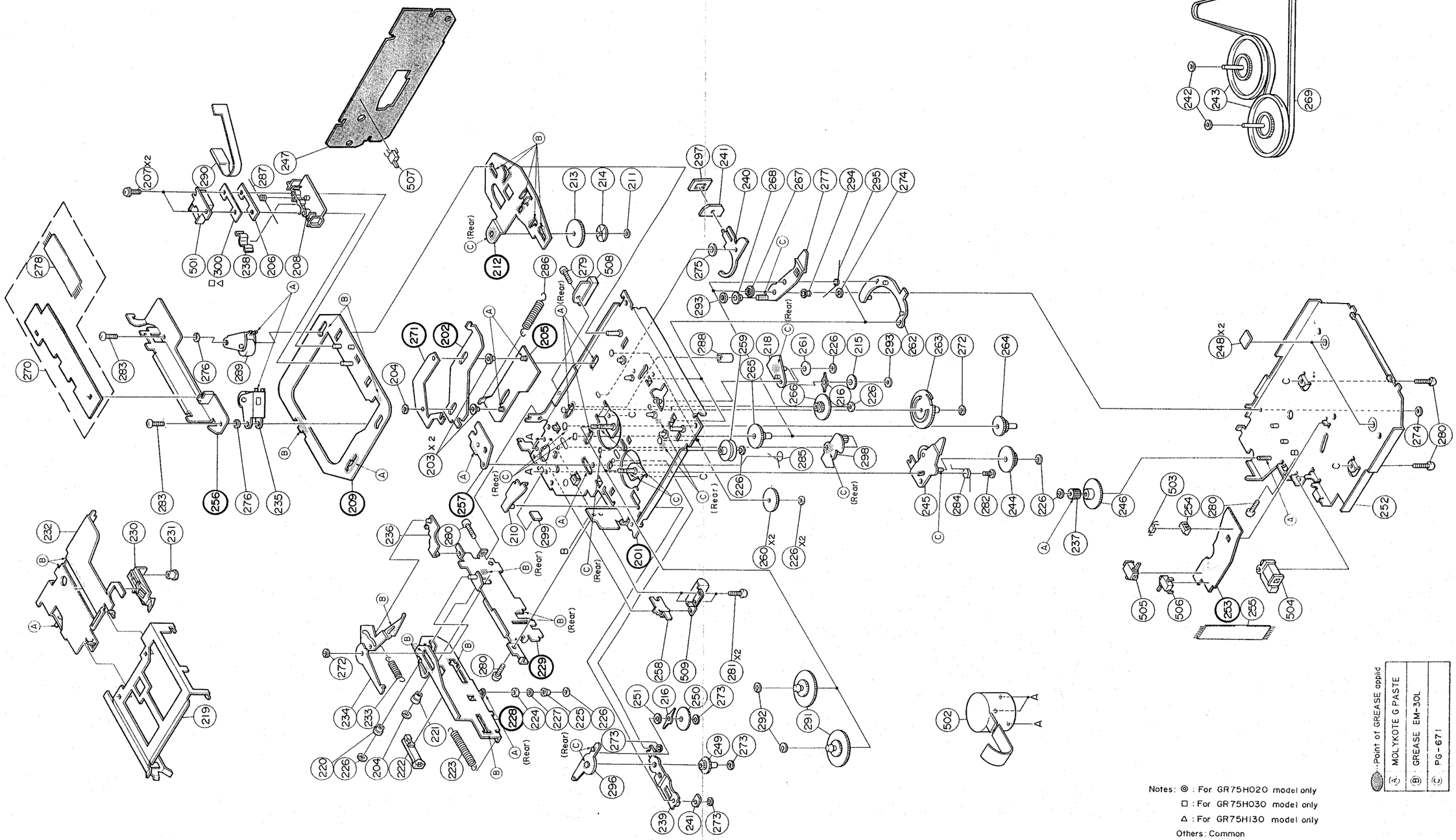
501	2-B	88T15971W01	Head
☆ 502	4-E	01V23900W60	Assy., Motor(13.2V-105mA)
◇ 502	4-E	01V44200W73	Assy., Motor(13.2V-80mA)
503	3-G	51T15144W01	Sensor, Photo
504	4-G	01T10371W01	R/F Sol. Assy
505	4-F	40T15382W01	SW., Detector (Pack Down)
506	4-G	40T15382W01	SW., Detector (Metal)
507	2-C	40T15222W01	SW., Detector (Pack In)
508	2-D	01T15249W01	Assy., Play Solenoid
509	4-D	01T10369W02	Assy., Eject Solenoid

Notes: ☆ ; For GR75L02Y model only ◇ ; For GR75L52Y model only
Others ; Common

Notes: ☆ ; For GR75L02Y model only ◇ ; For GR75L52Y model only
Others ; Common

Exploded View (GR75H Series) (4/4)

● For GR75H030/020/130 Model


Notes: ◎ : For GR75H020 model only
□ : For GR75H030 model only
△ : For GR75H130 model only
Others : Common
Point of GREASE applid
(A) MOLYKOTE G PASTE
(B) GREASE EM-30L
(C) PG-671

Symbol No.		IN-dex	Part No.	Description
□	290	2-B	84T35271W01	Head P.C. Board
△	290	2-B	84T35271W01	Head P.C. Board
	291	5-E	01T35403W01	Assy., Reel
	292	5-E	04B41345P12	Washer, Lock(M1.7)
	293	2-D	04B41345P35	Washer, Lock(M1.7)
	294	2-E	43A30827W01	Spacer, Motor Idler
	295	2-E	41A30490W01	Spring, Play Clutch
	296	5-D	01A40882W01	Assy., Riv Lever RF
	297	2-D	34A48030W01	Washer, Solenoid
	298	3-E	01A10201W02	Assy, Riv Lever Pause
	299	4-C	43A40388W01	Spacer, Polyslider
□	300	2-B	41A41416W01	Spring, Head
△	300	2-B	41A41416W01	Spring, Head
Miscellaneous				
◎	501	2-B	88T15971W01	Head
□	501	2-B	88T35406W01	Head
△	501	2-B	88T35406W01	Head
	502	5-F	01V41100W72	Assy., Motor(11.5v-85mA)
	503	3-G	51T15144W01	Sensor, Photo
	504	4-G	01T10371W01	R/F Sol. Assy.
	505	4-F	40T15382W01	SW., Detector (Pack Down)
	506	4-G	40T15382W01	SW., Detector(Metal)
	507	2-C	40T15222W01	SW., Detector (Pack In)
	508	2-D	01T15249W01	Assy., Play Solenoid
	509	4-D	01T10369W02	Assy., Eject Solenoid

Notes: ◎ ; For GR75H020 model only □ ; For GR75H030 model only
△ ; For GR75H130 model only Others ; Common

Cassette Deck Assembly Parts List (GR75H Series) (4/4)

Note : The parts without parts list are not supplied.

Symbol No.		IN-dex	Part No.	Description
	203	3-C	43A31453W01	Roller, Sub Head
	204		04B41345P01	Washer, Lock(M1.2)
	206	2-B	41A31756W01	Spring, Head
	207	2-A	03A38021W01	Screw, Flange(M2x4)
	208	2-B	43B12545W01	Tape, Guide
	210	4-C	01A30462W01	Assy., Riv Lever R/F Sol
	211	2-D	04B41345P29	Washer, Lock(M2.6)
	213	2-D	44A10295W01	Gear, Sensor
	214	2-D	14A10681W01	Reflector
	215	3-E	44A30480W01	Gear, Planet
	216		41A30475W01	Spring, Clutch
	218	3-E	01A30824W01	Assy., Riv Lever Reverse
◎	219	4-B	07B40283W01	Holder, Cassette
□	219	4-B	07B40283W01	Holder, Cassette
△	219	4-B	07B40012W01	Holder, Cassette
	220	5-B	43A12583W01	Roller, Eject
	221	5-C	43A63281F01	Roller, Plate Base
	222	5-C	44A82206F01	Rack
◎	223	5-C	41B10386W03	Spring, GR(Rack)
□	223	5-C	41B10386W03	Spring, GR(Rack)
△	223	5-C	41B10386W04	Spring, GR(Rack)
	224	5-C	43A10121W01	Roller, Eject A
	225	5-D	43A10360W01	Roller, Eject B
	226		04B41345P11	Washer, Lock(M1.2)
	227	5-D	43A12377W01	Roller, Eject C
	230	4-A	45B10376W01	Slider
	231	4-B	47A63278F01	Shaft, Slider
◎	232	4-A	01A10212W01	Assy., Riv Plate Base
□	232	4-A	01A10212W01	Assy., Riv Plate Base
△	232	4-A	01A40024W01	Assy., Riv Plate Base
◎	233	5-C	41B10386W01	Spring, Eject Arm
□	233	5-C	41B10386W01	Spring, Eject Arm
△	233	5-C	41B63283F11	Spring
◎	234	5-C	01A30883W01	Assy., Riv Eject Arm B
□	234	5-C	01A30883W01	Assy., Riv Eject Arm B
△	234	5-C	01A40021W01	Assy., Riv Eject Arm D
	235	3-B	01B30863W02	Assy., Pinch Roller
	236	4-C	45A10087W01	Lever Pack In SW
	237	4-F	44A20314W01	Pinion, Eject
	238	2-B	26A20537W01	Shield, plate
	239	5-D	01A40881W01	Assy., Riv RF Link
	240	2-D	45A40725W01	Lever, Play Sol.
	241		76T10374W01	Chip
	242	1-G	04S40075G05	Washer, Polyslider(M2.1)
	243	1-G	01A30488W01	Assy., Flywheel
	244	3-F	44A10141W01	Gear, Eject Idler
	245	3-E	01A10205W02	Assy., Riv Lever Clutch A
	246	3-F	44A10145W01	Gear, Eject
	247	2-B	01V33500W45	Assy., GR Control P.C. Board
	248	3-G	43A41656W01	Spacer, UHMW
	249	5-D	44A30481W01	Gear, RF Idler
	250	4-D	44A30483W01	Gear, RF
	251	4-D	04S40075G58	Washer, Polyslider(M2.1)
	252	3-H	01A30463W01	Assy., Riv. Cover Bottom
	254	3-G	15B11065W01	Guide, Photo
	255	4-G	30T15126W01	Wire, PC Sensor(7P)
	258	4-D	45A10101W01	Lever, Eject Sol
	259	3-D	49A30476W01	Pulley, Idler
	260	4-E	44A30482W01	Gear, Take Up
	261	3-E	44A30478W01	Gear, Sun
	262	3-E	44B10135W01	Gear, Fix
	263	3-E	44B30484W01	Gear, Pause
	264	3-F	44A10137W01	Gear, Pause Idler A
	265	3-E	44A30486W01	Gear, Pause Idler B
	266	3-E	44A30479W01	Gear, Reverse Idler
	267	2-E	44A30485W01	Gear, Motor Idler
	268	2-E	44A30487W01	Gear, Motor Clutch
	269	1-G	42A31850W01	Belt, GR
◎	270	3-A	01V43400W38	Assy., GR Audio P.C. Board
□	270	3-A	01V33300W03	Assy., GR Audio P.C. Board
△	270	3-A	01V33300W03	Assy., GR Audio P.C. Board
	272	3-F	04B41345P15	Washer, Lock(M1.2)
	273		04B41345P02	Washer, Lock(M1.7)
	274	3-H	04B41345P17	Washer, Lock(M1)
	275	2-D	04B41345P30	Washer, Lock(M3.1)
	276	3-B	04B41345P32	Washer, Lock(M3.1)
	277	2-E	01A30464W01	Assy., Riv Play Clutch
	278	2-A	30T15126W02	Wire, PC Joint 7P
	279	2-D	03S44205G78	Screw, Pan(M2x6)
	280		03S44205G30	Screw, Pan(M2.6x4)
	281	4-D	03S72235F53	Screw, Pan(M2x3.3)
	282	3-F	03A12132W02	Screw, Eject Clutch(M2x2.3)
	283		03S43997P64	Screw, Pan(M1.7x3)
	284	3-F	41A10384W01	Spring, Eject Clutch
	285	3-E	41A10385W01	Spring, Cas Push
	286	2-C	41B10386W02	Spring, Sub Head
	287	2-B	41A10387W01	Spring, Pinch Roller
	288	3-D	43A12719W01	Roller, Pause
	289	3-B	01B30863W01	Assy., Pinch Roller
◎	290	2-B	84T25151W01	Head P.C. Board

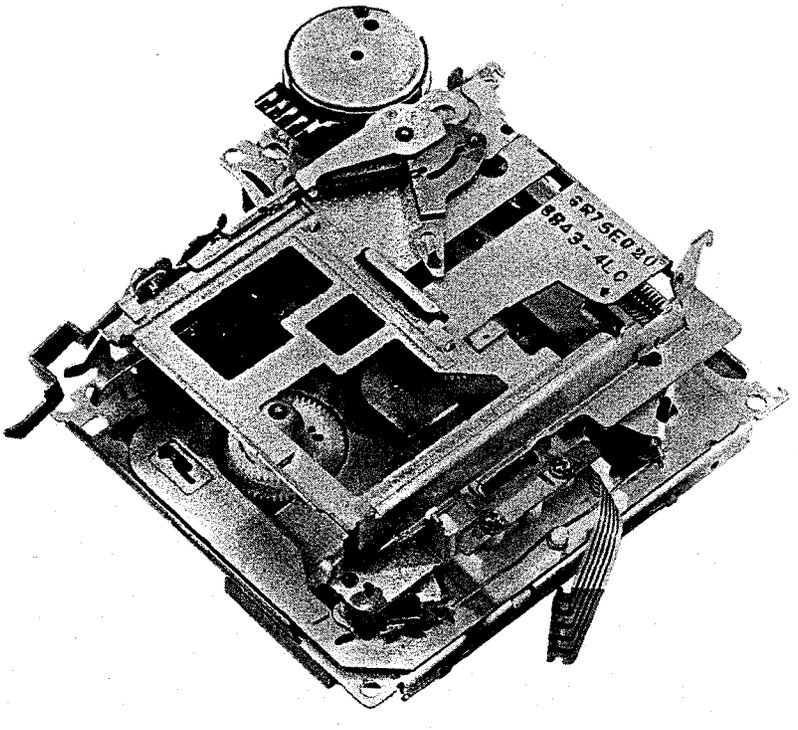
Notes: ◎ ; For GR75H020 model only □ ; For GR75H030 model only
△ ; For GR75H130 model only Others ; Common

TM 206

ALPINE SERVICE MANUAL

Cassette Deck Mechanism

ADDENDUM & REVISED (III)



GR/GR-Y SERIES

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List of Usable Lock Washers

	SIZE	PARTS NO.	QUANTITY		
			GR75E Series	GR75L Series	GR-Y Series
1	(M1.2 × 3.5 × 0.25)	04B41345P01	8	7	6
2	(M1.7 × 3.5 × 0.25)	04B41345P02	1	1	2
3	(M2.1 × 5 × 0.25)	04B41345P06	1	1	0
4	(M1.2 × 2.5 × 0.25)	04B41345P11	7	7	8
5	(M1.7 × 3.5 × 0.35)	04B41345P12	2	2	2
6	(M1.2 × 3.5 × 0.35)	04B41345P15	1	1	1
7	(M1 × 2.5 × 0.25)	04B41345P17	1	1	1
8	(M2.6 × 5 × 0.25)	04B41345P29	1	1	0
9	(M3.1 × 8 × 0.05)	04B41345P30	1	1	1
10	(M1.7 × 3 × 0.25)	04B41345P31	1	1	1
11	(M3.1 × 5 × 0.35)	04B41345P32	2	2	2
12	(M1.2 × 2.5 × 0.3)	04B41345P34	1	1	0
13	(M2.1 × 4 × 0.25)	04B41345P37	0	0	1
14	(M2.6 × 4.7 × 0.25)	04B41345P38	0	0	1

List of Usable Oil

1) Molykote E paste
2) Grease EM-30L
3) Grease FLOIL 425A

List of Usable Jigs

1) GR bottom gear jig (Part No. 44A20788W01)
2) Head height adjustment gauge
   AI-500 (Part No. AI-500)

Memo

Disassembly, Assembly and Replacement of Functional Parts

1. Disassembly and Assembly of Bottom Cover

(1) Turn the mechanism around as shown in Figure 1.
(2) Remove M1 lock washer ① as shown in Figure 1.
(3) Remove three screws ② as shown in Figure 1.
(4) Lift the bottom cover slowly from the position Ⓐ-1, pull the hooks out of the holes in the chassis, and remove the bottom cover as shown in Figure 1.
(5) When remounting the bottom cover, first turn the front of the mechanism up as shown in Figure 2.
(6) Slide the slider in the direction Ⓐ-2 as shown in Figure 2.
(7) Push down the cassette holder in the direction Ⓐ-3 as shown in Figure 2.
(8) Pull the door pin in the direction Ⓐ-4 so that the mechanism is locked in as shown in Figure 2.
(9) Turn the mechanism around as shown in Figure 3.
(10) Pull the automatic metal lever in the direction Ⓐ-5 and the RF solenoid chip in the direction Ⓐ-6 as shown in Figure 3.
(11) Insert the hooks of the bottom cover into the chassis in the direction Ⓐ-7, and then join the part Ⓐ-8 of the bottom cover to the chassis slowly, making sure that the 3 points indicated with the straight lines in the Figure 3 are fitted properly.
If there are troubles in mounting the bottom cover, do not apply force but remove the bottom cover once again and check the positions of the individual parts. (Refer to Figure 3.)
(12) Since the hooks marked Ⓐ-8 will be lifted slightly as shown in Figure 4, insert the jig through the hole Ⓐ-9, and fix it turning the jig slightly in the direction Ⓐ-11.
Instead of operation (12), turn the gear nose slowly with a precision screwdriver etc., taking care not to damage it.
After 2 to 3 turns, it will click into place.
(Refer to Figures 4 and 5.)
(13) Fix the screws and the lock washer that have been removed.

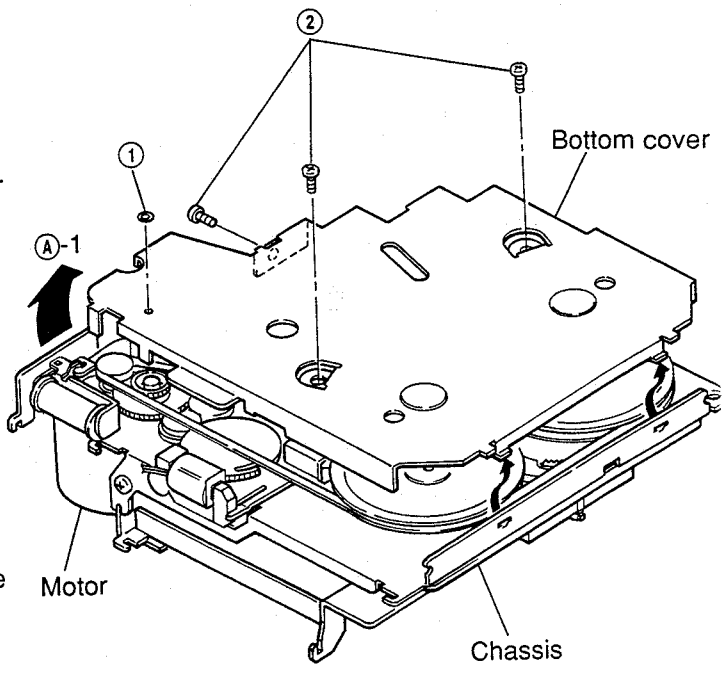


Figure 1

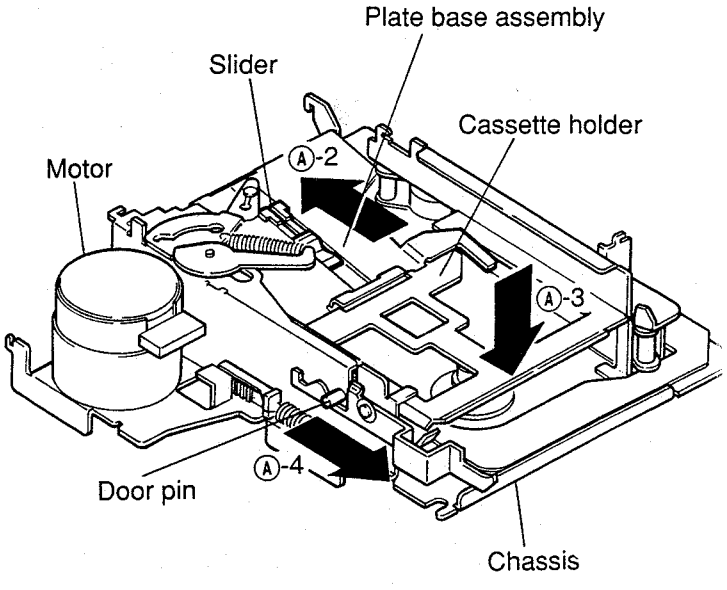


Figure 2

(14) Insert the jig into the hole Ⓐ-9 as shown in Figure and rotate the eject solenoid counterclockwise about 20 times, pulling it in the direction Ⓐ-10 with the finger.
Then the eject operation is completed.
Instead of operation (14), the eject operation can be performed by mounting the mechanism to the product. (Refer to Figures 4 and 5.)

Note: Do not reuse the used lock washers for mounting.
When turning the mechanism, be careful not to drop the gear and the flywheel.
Fasten the three screws with a fastening torque of 6 kg.cm.

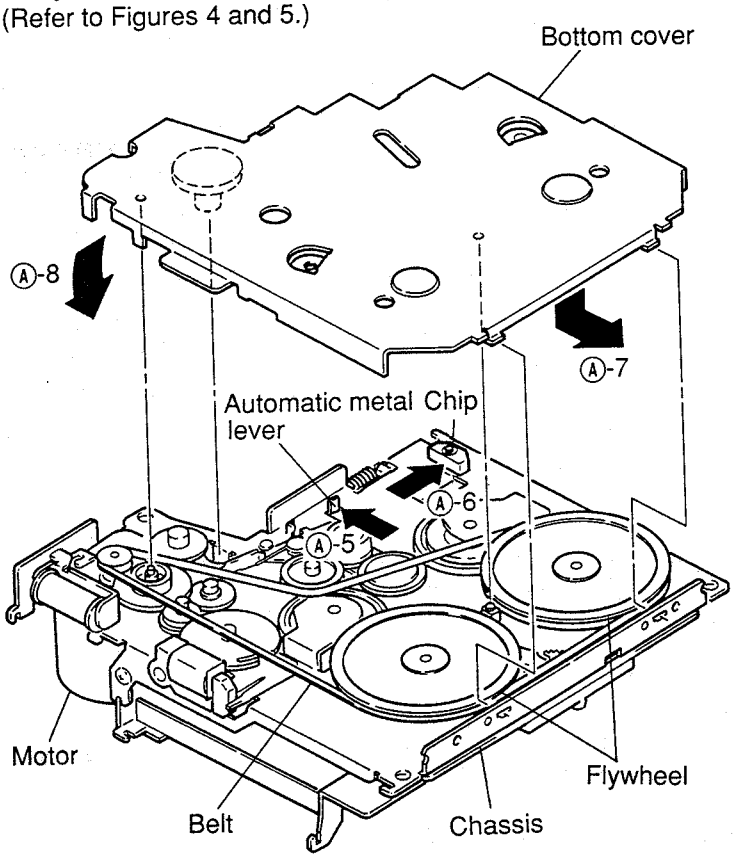


Figure 3

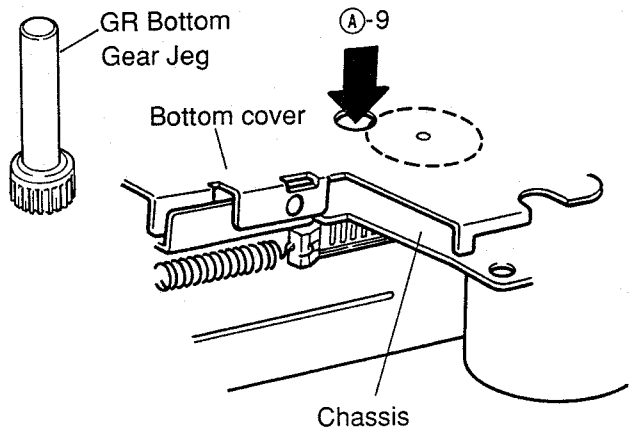


Figure 4

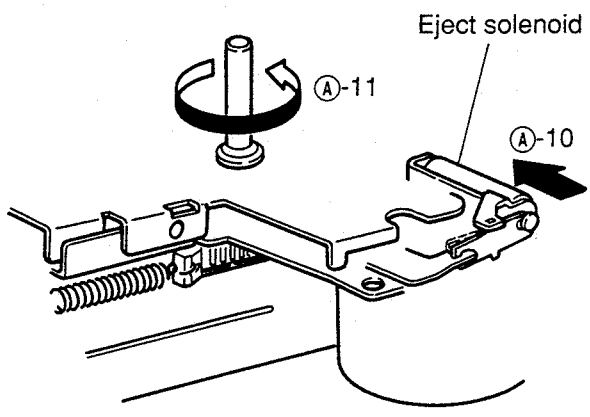


Figure 5

2. Replacement of the bottom cover mounting parts

a. Replacement of the eject gear
(1) Remove M1.2 lock washer ③ as shown in Figure 6.
(2) Pull the eject pinion out of the eject gear and remove the eject gear as shown in Figure 6.
(3) Apply the molykote E paste to the section Ⓑ-1, and mount the eject gear following the removal steps in the reverse order. After replacement is finished, make sure that the gear rotates smoothly. (Refer to Figure 6.)

Note: Do not reuse the used lock washers for remounting.
Take care to avoid damage by piercing and tearing.

b. Replacement of the RF solenoid
(1) Remove two solders ④ and remove the RF solenoid from the bottom cover by pulling it up as shown in Figure 6.
(2) Replace the solenoid with a new one, and remount it following the removal steps in the reverse order as shown in Figure 6.

Note: When removing solder ④, set the temperature of the soldering iron to 350° ± 10° and the soldering time to 1 – 3 seconds. Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damaged.

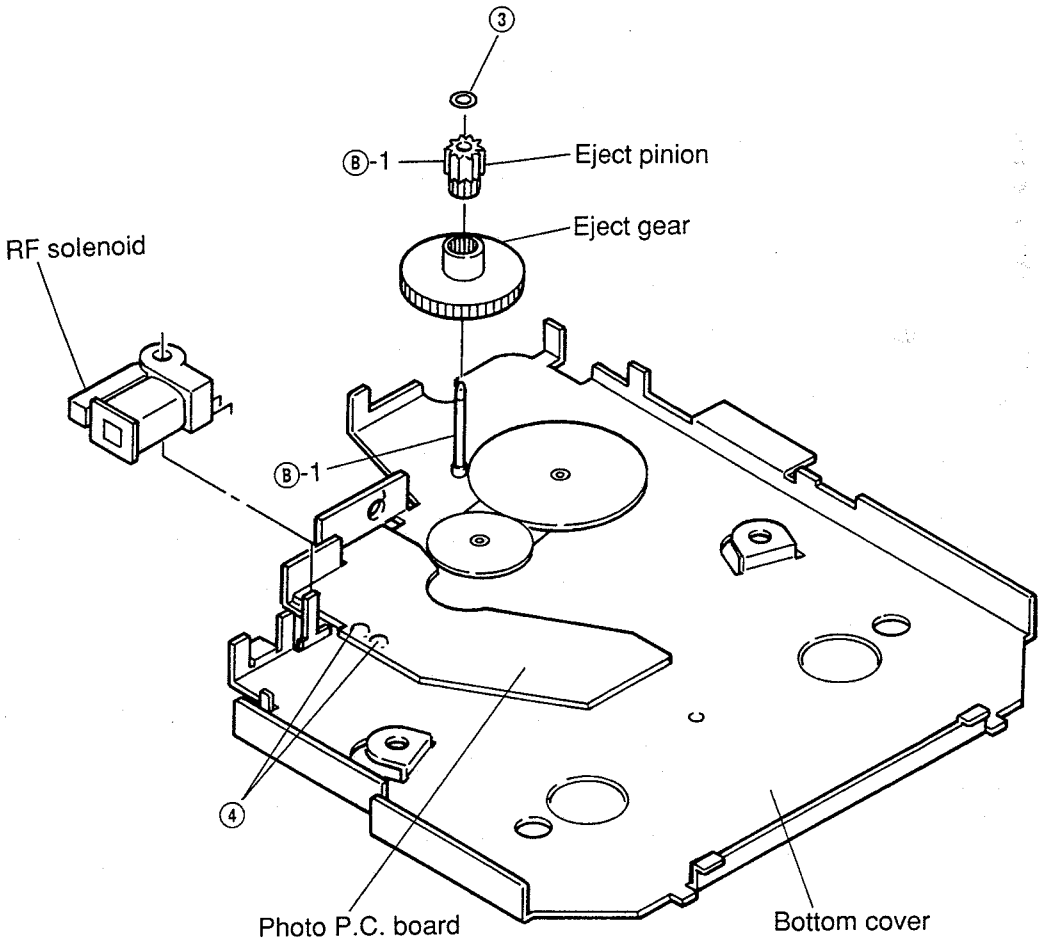


Figure 6

c. Replacement of the photo sensor
(1) Remove four solders ⑤ as shown in Figure 7.
(2) Remove the photo guide together with the photo sensor from the photo P.C. board as shown in Figure 7.
(3) Insert the new photo sensor into the photo guide, and bend the legs of the photo sensor in the direction marked Ⓑ-2 as shown in Figure 7.
(4) Insert the photo guide into the P.C. board and solder the legs so that the photo sensor is set as indicated by ⬚ in Figure 7.

Note: When using the soldering iron, set the temperature of the soldering iron to 350° ± 10° and the soldering time to 1 – 3 seconds. Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damaged. Also take care that the photo guide is properly fixed and straight.

d. Replacement of the detector switch (Automatic metal pack-in)
(1) Remove 4 solders ⑥ with which the switch is fixed as shown in Figure 7.
(2) Prepare the terminals of the switch of the new solder as shown in Figure 8.
(3) After that, insert the switch into the photo P.C. board, and solder the terminals.

Note: When using the soldering iron, refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Also take care that the switch guide is properly fixed and straight.

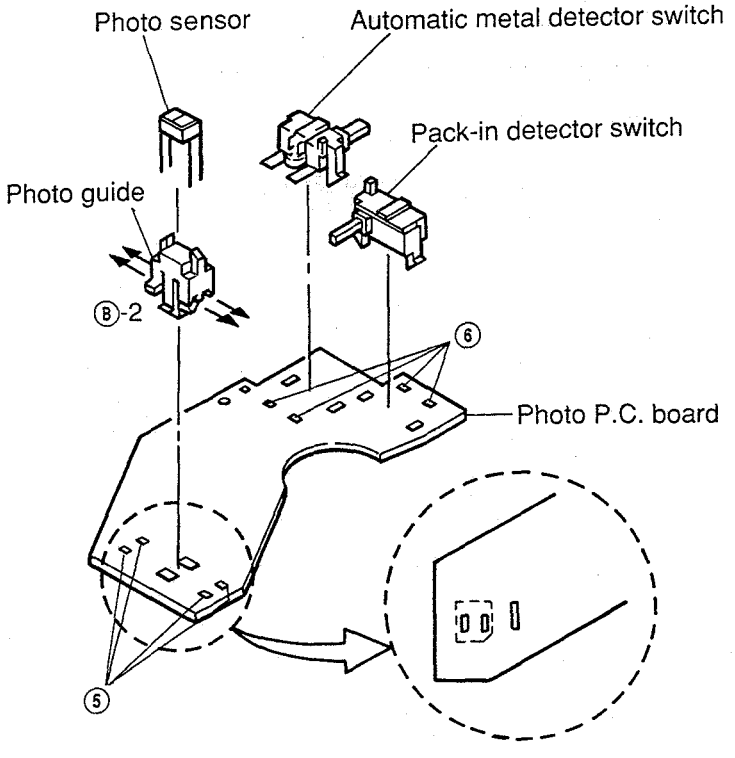


Figure 7

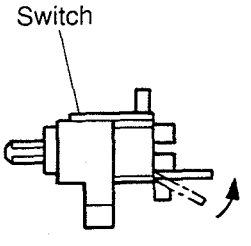


Figure 8

3. Replacement of the mounting parts on the rear of the main chassis

a. Replacement of the belt

(1) After removing the bottom cover, remove the belt.

(2) Clean the new belt with absolute alcohol, and fix it as shown in Figure 9.

Note: When fixing the belt, make sure that it is not twisted or dirty. When removing the belt, do not turn up the front of the chassis.

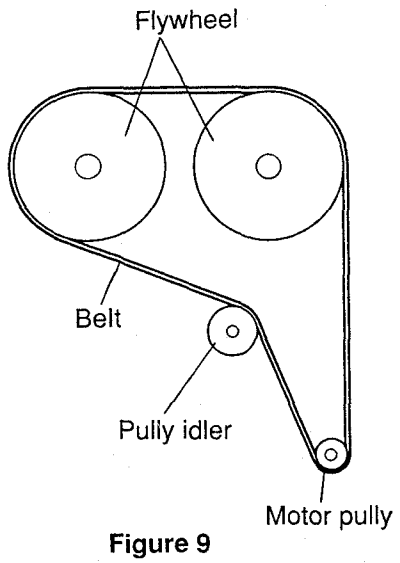


Figure 9

b. Replacement of the motor

(1) After removing the belt, remove spring ⑦ as shown in Figure 10.

(2) Remove solder ⑧-1, and remove the parallel wire (5P) from the control P.C. board as shown in Figure 11.

(3) Remove two screws ⑨ and ⑩, and remove the motor, taking care not to damage the motor idler gear. (Refer to Figure 10.)

(4) Mount the new motor following the removal steps in the reverse order.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Since the parallel wire is very easily damaged, handle it with care.
Fasten the two screws with a fastening torque of 3 kg.cm.

*When inserting the clutch spring, be careful of the inserting direction as shown in the Figure.

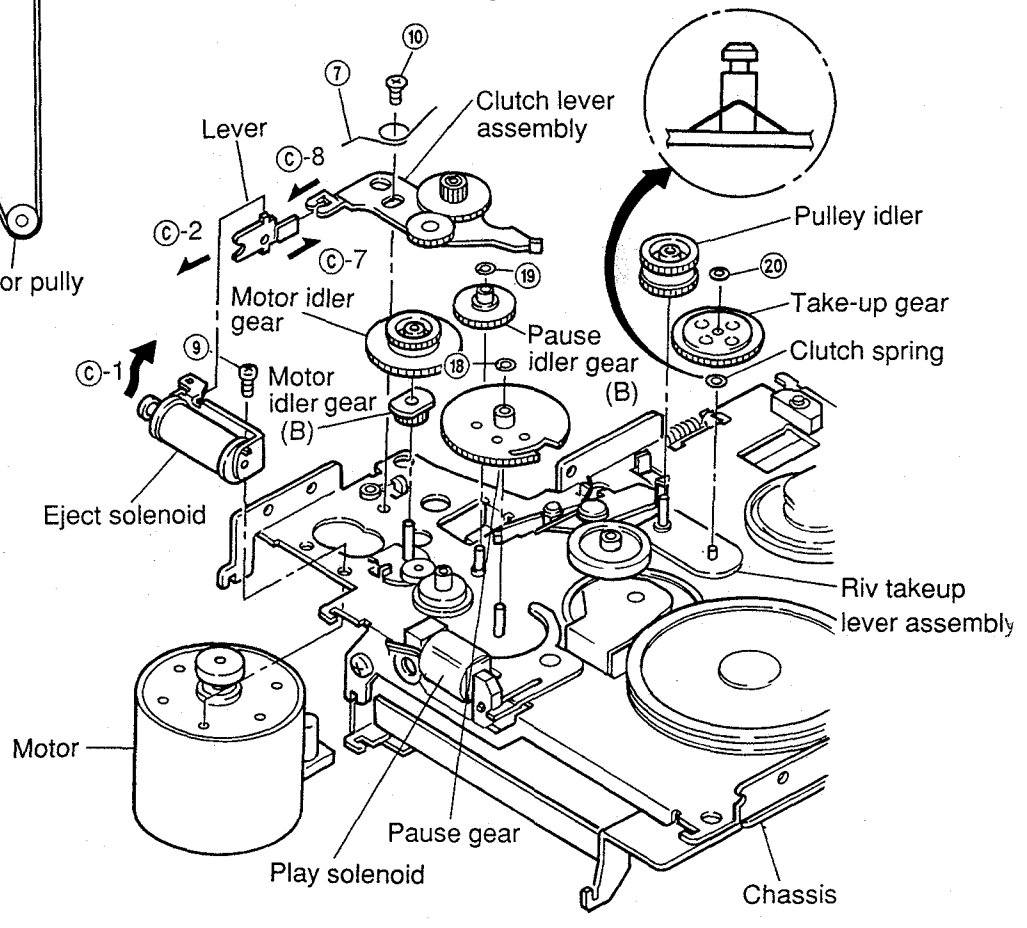


Figure 10

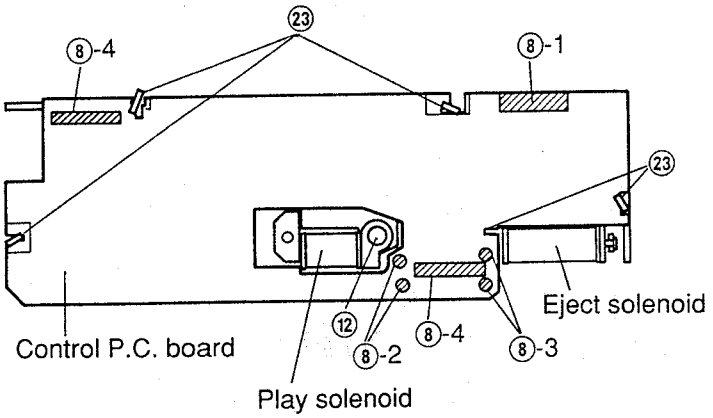
c. Replacement of the flywheels
(1) After removing the belt, pull out the two flywheels. Take care not to loose the polyslider washer ⑪ located between the flywheel and the chassis. (Refer to Figure 12.)
(2) Fix the polyslider washer to the new flywheel and mount the flywheel to the chassis.

d. Replacement of the play solenoid
(1) Remove the two solders ⑧-2 as shown in Figure 11.
(2) Remove one screw ⑫ and remove the solenoid as shown in Figure 11.
(3) Mount the new solenoid following the removal steps in the reverse order.

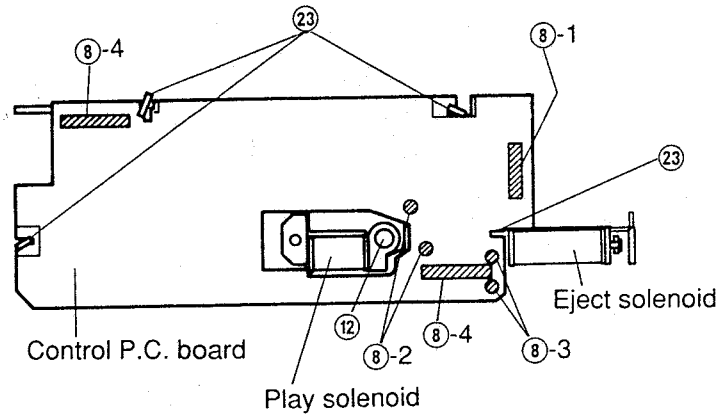
Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Fasten the screws with a fastening torque of 2.3 kg.cm.

e. Replacement of the eject solenoid
(1) Remove two solders ⑧-3. Take care not to loose the tube that protects the wire. (Refer to Figure 11.)
(2) Remove screw ⑨ and remove the play solenoid as shown in Figure 10.
(3) Align position ©-1 of the new solenoid with position ©-2 of the lever and fasten the screw as shown in Figure 10.
(4) Lead the wire through the tube and solder it.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Fasten the screws with a fastening torque of 3 kg.cm. As the solder wires are not insulated, do not let them cross each other.



[For GR75E020, GR75E010, GR75E01A, GR75E01C models]



[For GR75L020, GR75L010 models]

Figure 11

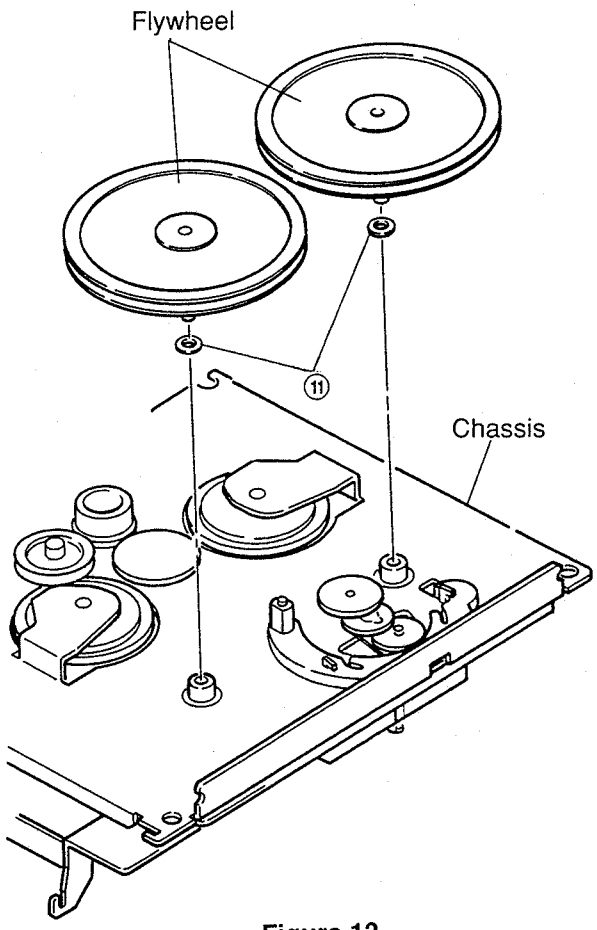


Figure 12

f. Replacement of gears

(f-1) Replacement of the reverse idler gear
(1) Remove M1.2 lock washer ⑬, pull it up from the stud of the chassis and remove the gear as shown in Figure 13.
(2) Remount following the removal steps in the reverse order.

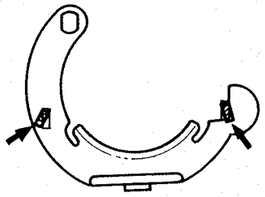
(f-2) Replacement of the sun gear
(1) Remove M1.2 lock washer ⑭, pull it up from the stud of the chassis and remove the gear as shown in Figure 13.
(2) Mount it, following the removal steps in the reverse order.

(f-3) Replacement of the fixing gear
(1) Adjust the two mounting claws for the fix gear on the chassis ⑮ and remove the section Ⓒ-3 of the gear by pulling it up in the direction of the arrow shown in Figure 13.
(2) Insert the section Ⓒ-4 of the new gear into the chassis, and mount it following the removal steps in the reverse order as shown in Figure 13.

(f-4) Replacement of the reverse lever assembly and planet gear
(1) Remove both the fixing gear and the sun gear and remove the reverse lever assembly as shown in Figure 13.
(2) Remove M1.7 lock washer ⑯ and remove the planet gear as shown in Figure 14.
(3) Mount the new planet gear and reverse lever following the removal steps in the reverse order.

Notes on f-1 through f-4:
After mounting all parts, check if the reverse lever moves in the directions marked Ⓒ-5 when the reverse gear is turned clockwise and counterclockwise.

*After mounting the fixing gear, bend the claws ⑮ into the form of as shown in the Figure.



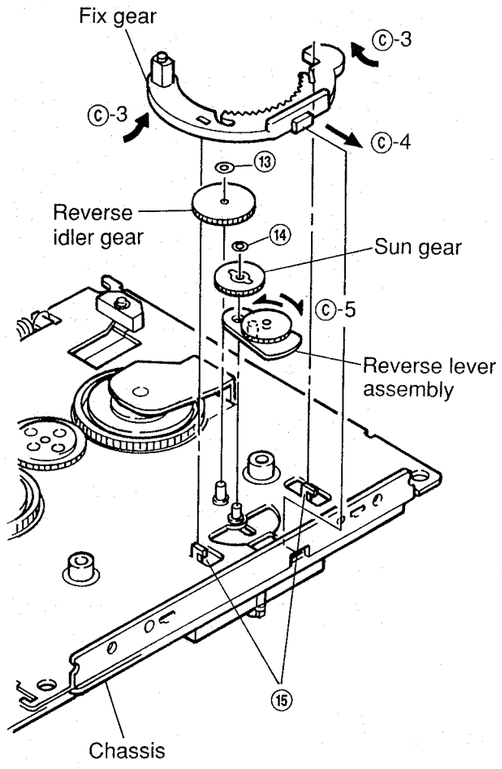


Figure 13

(f-5) Replacement of the clutch lever assembly and eject idler gear
(1) After removing the motor, remove the motor idler gear and the motor idler gear (B) and remove the clutch lever assembly as shown in Figure 10.
(2) Remove M1.2 lock washer ⑰ and remove the eject idler gear as shown in Figure 15.
(3) Mount the new gears and clutch lever following the removal steps in the reverse order.

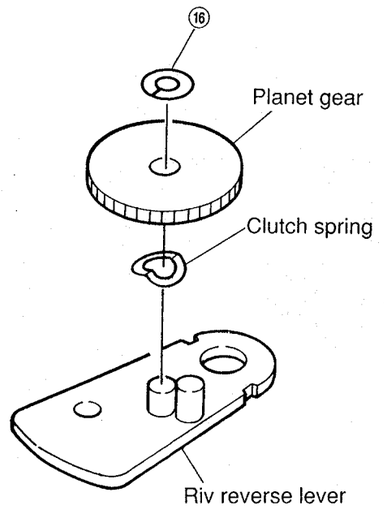
Note: When mounting the gears to the lever, apply grease (FLOIL 425A) to the position Ⓒ-6 as shown in Figure 15. Align the position Ⓒ-7 with the position Ⓒ-8 and mount the clutch lever as shown in Figures 10 and 15.

(f-6) Replacement of the pause gear
(1) Remove M1.2 lock washer ⑱ and remove the pause gear pulling it up from the stud of the chassis as shown in Figure 10.
(2) Mount the new gear following the removal steps in the reverse order.

(f-7) Replacement of the pause idler gear (B)
(1) After removing the motor and the motor idler gear, remove M1.2 lock washer ⑲ and remove the gear by pulling it up from the stud of the chassis as shown in Figure 10.
(2) Mount the new gear by following the removal steps in the reverse order.

(f-8) Replacement of the take-up gear
(1) After removing the belt and the pulley idler gear, remove M1.2 lock washer ⑳ by pulling it up from the stud of the riv take-up lever assembly as shown in Figure 10.
(2) Remount the take-up gear following the removal steps in the reverse order.

Notes on f:
Do not reuse the used washers. Take care to avoid damage by piercing and tearing.



[Disassembly Reverse Lever Assembly]

Figure 14

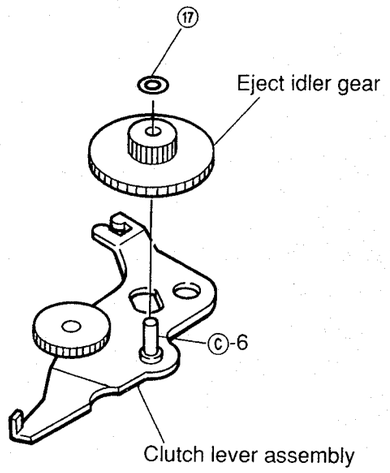


Figure 15

4. Replacement of the parts mounted on the front of the chassis

a. Replacement of the audio P.C. board
(1) Remove two solders (21) and remove the parallel wire (7P) and the head P.C. board as shown in Figure 16.
(2) Adjust the two claws (22) to the rectangular holes on the P.C. board and remove the P.C. board as shown in Figure 16.
(3) After replacement, mount the new P.C. board following the removal steps in the reverse order.

Note: The head P.C. board and the parallel wire are easily damaged. Handle them with care. Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Do not bring the soldering iron near the head P.C. board.

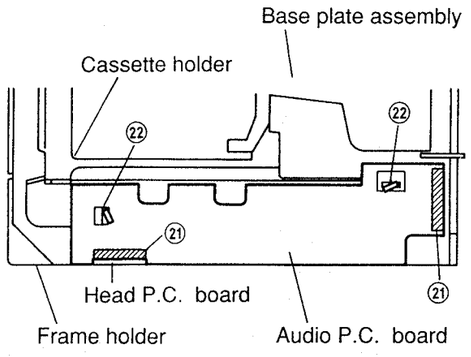


Figure 16

b. Replacement of the control P.C. board
(1) Remove seven solders (8) and remove the three parallel wires and the wires of the eject solenoid and of the play solenoid as shown in Figure 11.
(2) Remove five claws (23) and remove the P.C. board as shown in Figure 11. [For GR75E020, GR75E010, GR75E01A, GR75E01C models] Remove four claws (23) and remove the P.C. board as shown in Figure 11. [For GR75L020, GR75L010 models]
(3) After replacing the old P.C. board with a new one, mount it following the removal steps in the reverse order.

Note: As mentioned in Item 4-a, handle the parallel wires carefully, and be sure that the temperature of the soldering iron and the soldering time are proper. As the wires of the eject solenoid are not insulated, do not let them cross each other.

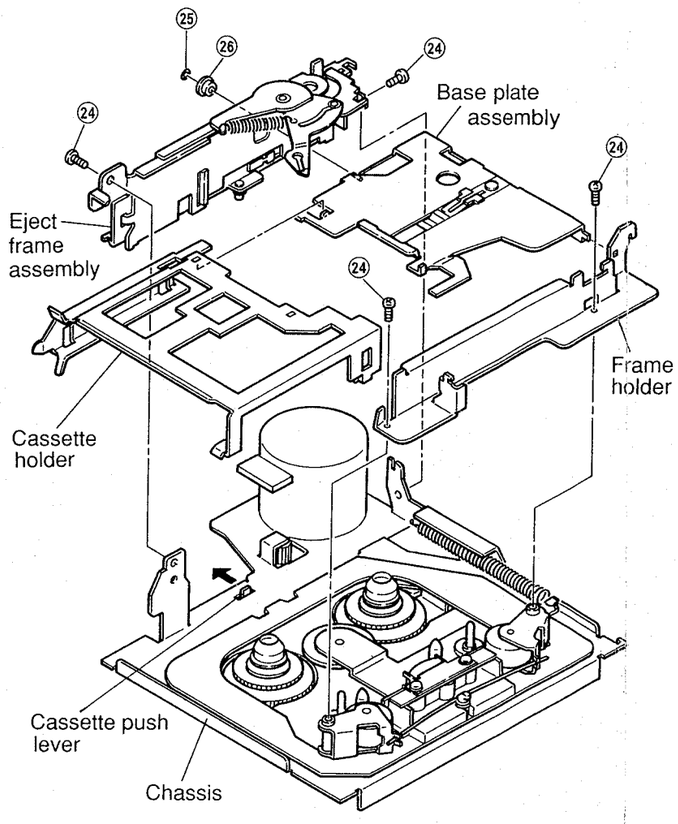


Figure 17

c. Disassembly and assembly of the cassette holder
(1) Remove four screws (24) and remove the eject frame assembly and the frame holder as shown in Figure 17.
(2) Remove M1.2 lock washer (25) and plate base roller (26) and remove the cassette holder and the base plate assembly as shown in Figure 17.
(3) Remount them following the removal steps in the reverse order.

Notes: 1. When mounting the cassette holder and the base plate, insert the slider shaft into the eject arm and fix them turning the slider shaft in the direction indicated by the arrow in the figure. Make sure that the cassette holder and the base plate are in the cassette-in mode during this operation. (Refer to Figure 18).
2. When mounting the eject frame assembly, push the cassette push lever in the direction indicated by the arrow in the Figure 17.
3. When mounting the base plate assembly and the eject frame assembly, or when mounting the eject frame assembly to the chassis, do not apply excessive force to avoid deformations of the eject arm and the frame.
4. Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

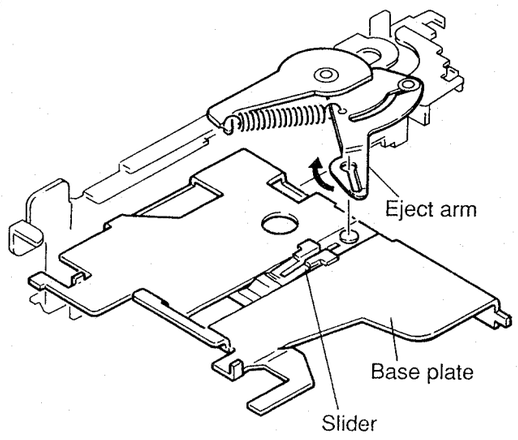


Figure 18

d. Replacement of the reels
(1) Remove M1.7 two lock washers (26) (Refer to figure 19).
(2) Move the select lever in the direction marked (D)-1 in the Figure and remove the reel by gripping the reel gear as shown in Figure 19.
(3) After replacement, mount the new reels following the removal steps in the reverse order.
(4) After mounting, check the tape speed and the wow and flutter with test tape MTT-111.

Note: Since the reel is easily loosened if the cap is gripped, always handle it gripping the gear. Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

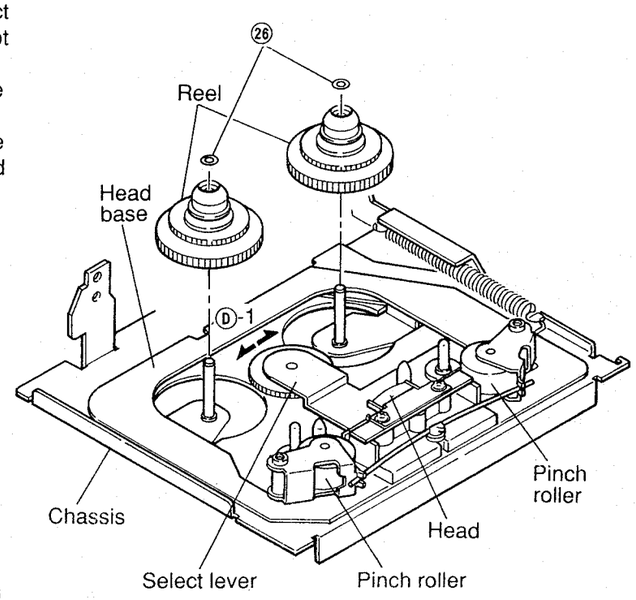


Figure 19

e. Replacement of the pinch rollers

(1) Remove pinch roller spring ㉗ as shown in Figure 20.
(2) Remove M3.1 two lock washers ㉘ and remove the pinch roller as shown in Figure 20.
(3) Mount the pinch rollers following the removal steps in the reverse order.
Apply insulation coating to the position Ⓓ-2 of the pinch roller as shown in Figure 20.

Note: Make sure that the pinch rollers are thoroughly fixed and that they are not deformed. Do not reuse used lock washers. Take care to avoid damage by piercing and tearing.

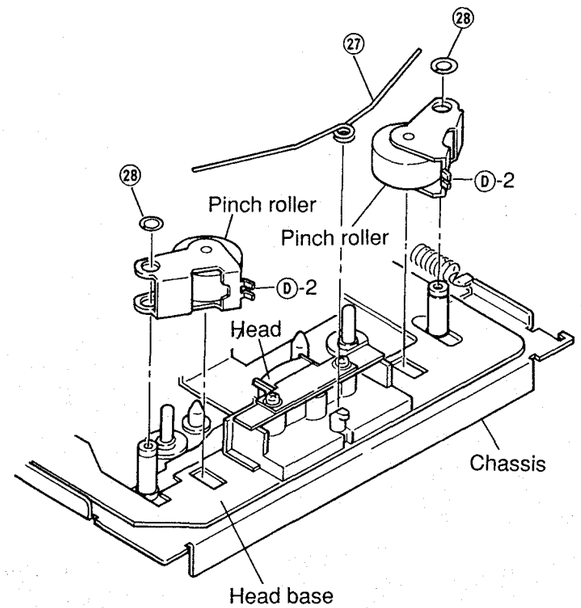


Figure 20

f. Replacement of the head

(1) After removing the pinch roller spring, remove two screws ㉙ as shown in Figure 21.
(2) Remove solder ㉚ and remove the head from the head P.C. board as shown in Figure 22.
(3) After replacement, mount the new head following the removal steps in the reverse order.

Notes: 1. Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Do not bring the soldering iron near the head P.C. board. Make sure that the head P.C. board is not lifted.
2. Fasten the two screws with a fastening torque of 2.3 kg.cm. Note that the tension of the head spring can be decreased if the screws are fastened too strongly.

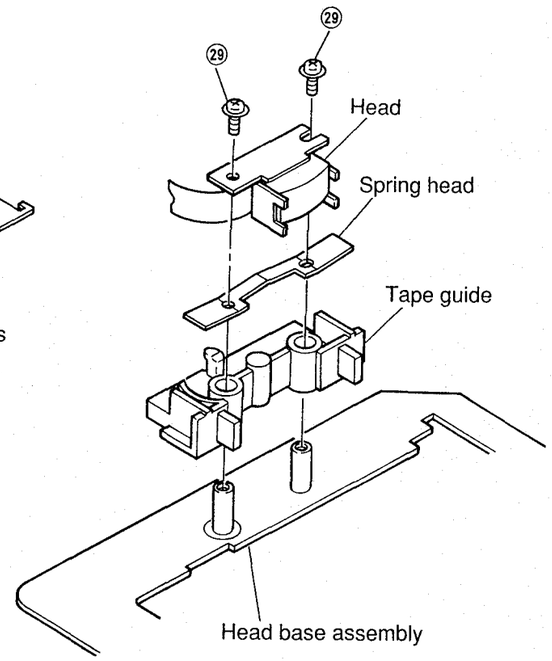


Figure 21

(4) Adjust the height of the head as shown in Figures 23, 24 and 25.
① Place the height adjustment gauge (AI-500) on the head base, and adjust the height so that the check bar fits in the tape head guide smoothly.
② When the check bar touches the top (or bottom) of the tape guide, insert a spacer (t 0.1 mm or polislider washer t 0.13 mm).
If necessary, remove the spacer.

Note: If you do not have a height gauge like described in (4)-①, run the tape at normal speed and adjust the height of the head and the tape head guide so that the tape does not curl.

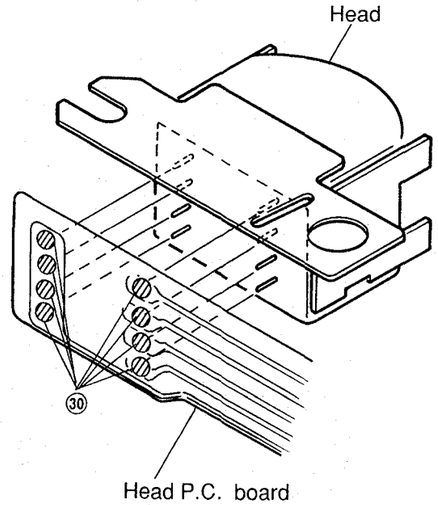


Figure 22

(5) After having assembled the complete mechanism, adjust the angle of the head with test tape MTT-113C. (Refer to chapter "Adjustment of the head angle".) After the adjustment, apply the screw lock and fix the screws.

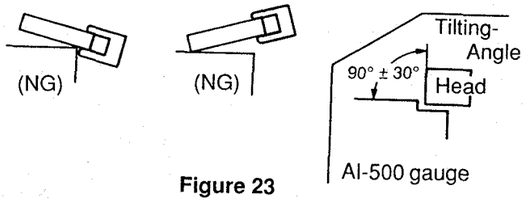


Figure 23

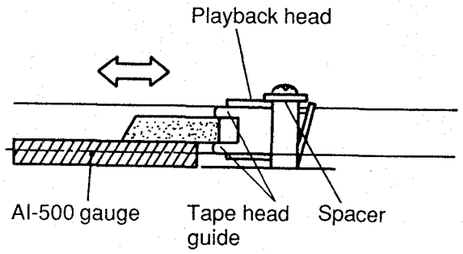


Figure 24

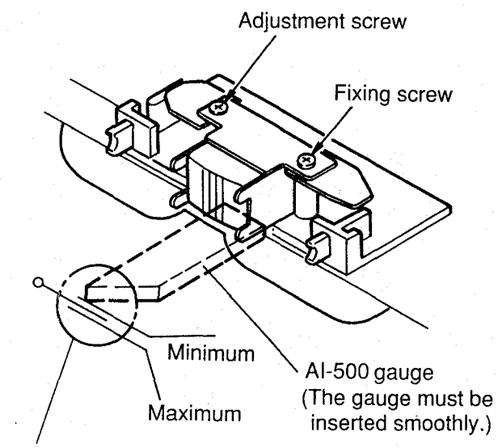
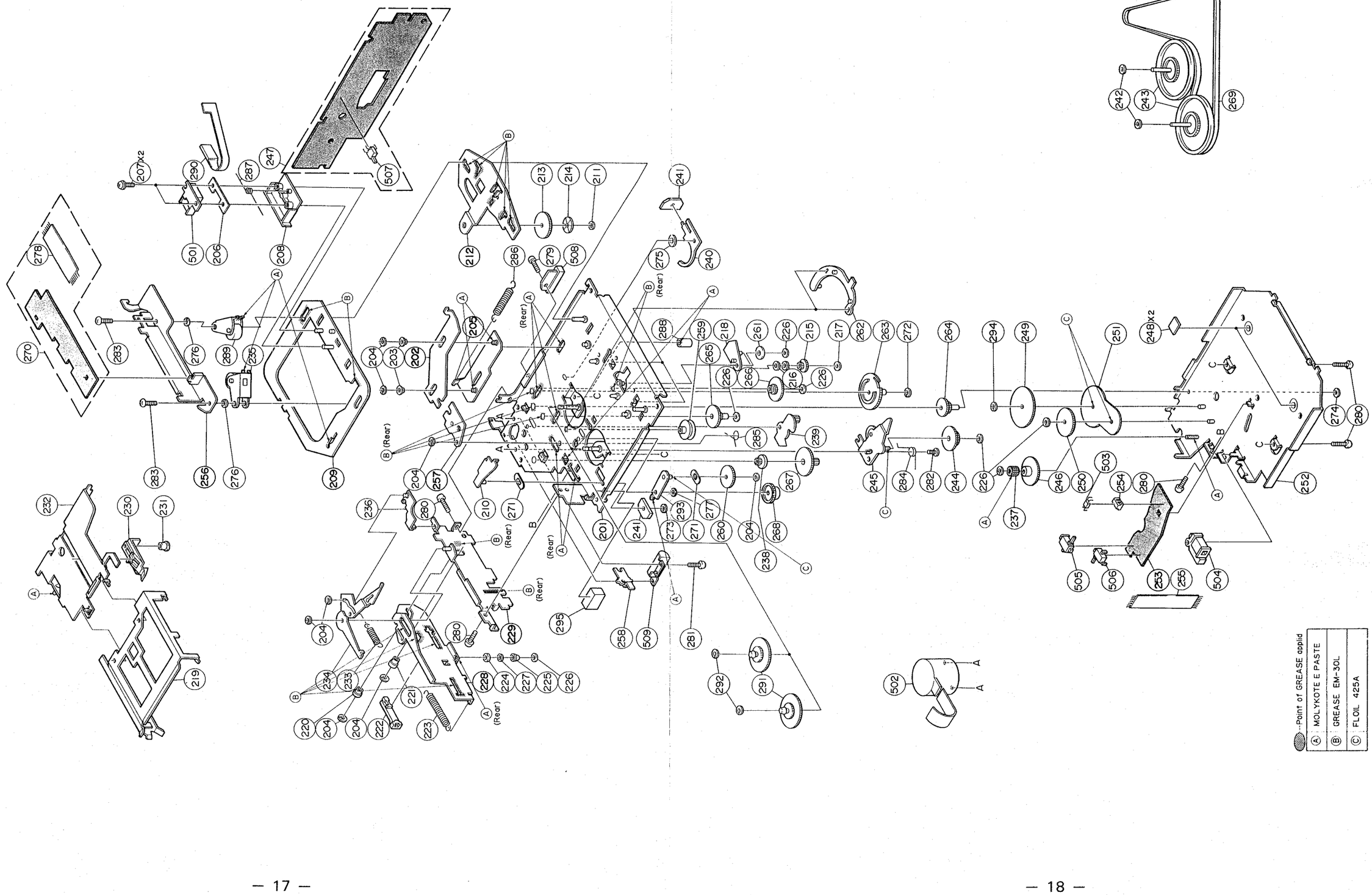


Figure 25

Exploded View (1/3)

● For GR75E010/01A/01C/020 Models



Cassette Deck Assembly Parts List (1/3)

Note : The parts without parts list are not supplied.

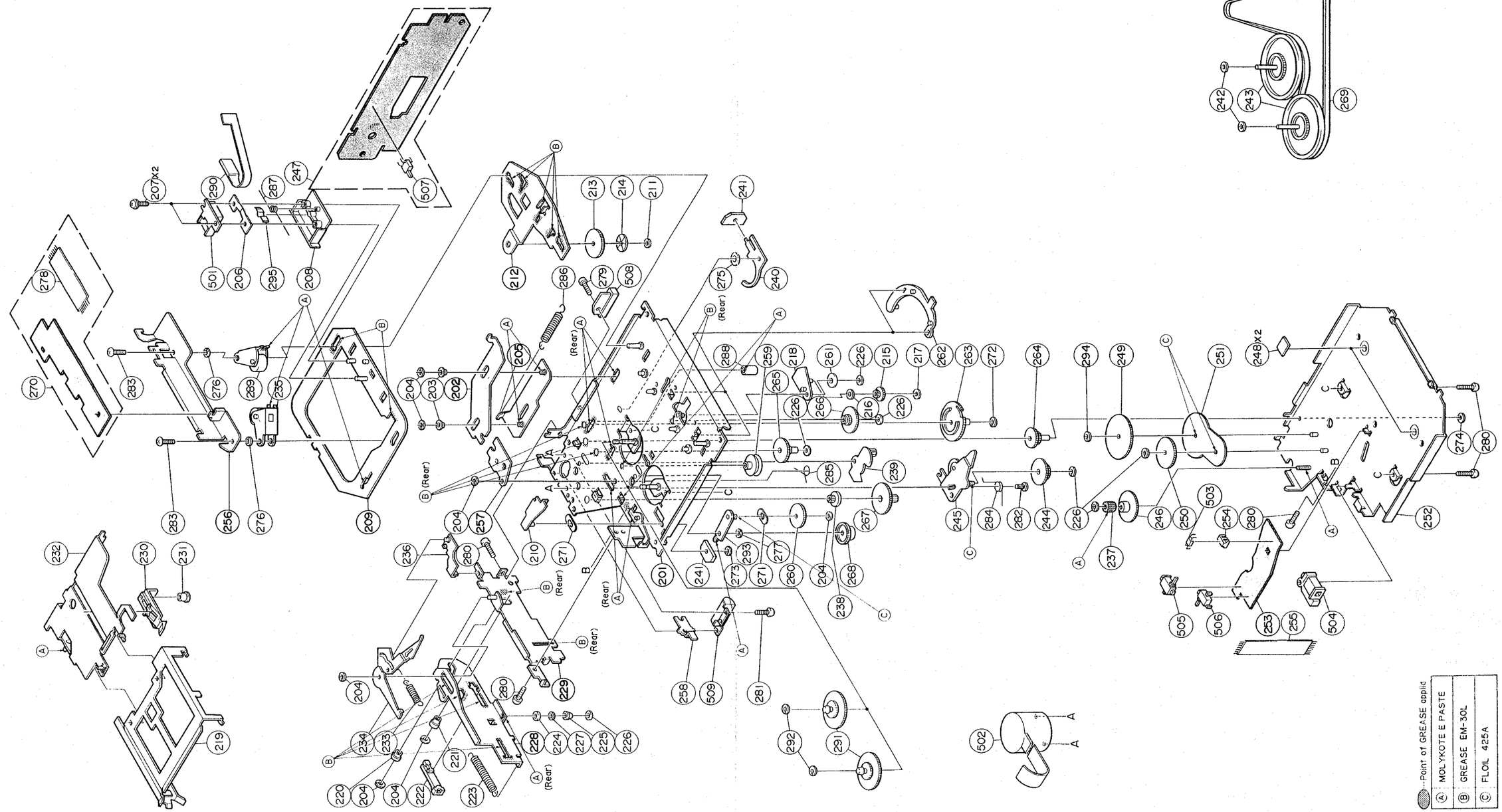
Symbol No.	IN-dex	Part No.	Description
203	3-C	43A11072W01	Roller, Sub Head
204		04B41345P01	Washer, Lock(M1.2)
206	2-B	41A10095W01	Spring, Head
207	2-B	03S40019G03	Screw, F-Locks(M2x4)
208	2-B	43B12545W01	Tape, Guide
210	4-C	01A10206W01	Assy.,Riv Lever R/F Sol
211	2-D	04B41345P29	Washer, Lock(M2.6)
213	2-D	44A10295W01	Gear, Sensor
214	2-D	14A10681W01	Reflector
215	3-E	44A10142W01	Gear, Planet
216	3-E	41A10097W02	Spring, Clutch
217	3-E	04B41345P35	Washer, Lock(M1.7)
218	3-E	01A21853W01	Assy., Riv Lever Reverse
219	4-B	07B10074W01	Holder, Cassette
220	5-B	43A12583W01	Roller, Eject
221	5-C	43A63281F01	Roller, Plate Base
222	5-C	44A82206F01	Rack
223	5-C	41B10386W03	Spring, GR(Rack)
224	4-C	43A10121W01	Roller, Eject A
225	4-D	43A10360W01	Roller, Eject B
226		04B41345P11	Washer, Lock(M1.2)
227	4-D	43A12377W01	Roller, Eject C
230	4-A	45B10376W01	Slider
231	4-B	47A63278F01	Shaft, Slider
232	4-A	01A10212W01	Assy.,Riv Plate Base
233	4-C	41B10386W01	Spring, Eject Arm
234	4-B	01A10148W01	Assy., Riv Eject Arm A
235	3-B	01B10381W02	Assy., Pinch Roller
236	4-C	45A10087W01	Lever Pack In SW
237	4-F	44A12975W01	Pinion, Eject
238	4-E	44A13617W01	Gear, Motor Idler(B)
239	3-E	01A10201W02	Assy., Riv Lever Pause
240	2-D	45A10092W01	Lever, Play
241		76T10374W01	Chip
242	1-G	04S40075G05	Washer Polyslider (M2.1)
243	1-G	01A10368W01	Assy., Flywheel
244	3-F	44A10141W01	Gear, Eject Idler
245	3-E	01A10205W01	Assy., Riv Lever Clutch A
246	3-F	44A10145W01	Gear, Eject
247	2-B	01V11500W18	Assy., GR Control P.C. Board
248	3-G	43A90918F01	Spacer, Polyslider
249	3-F	44A11063W01	Gear, Bottom A
250	3-F	44A11064W01	Gear, Bottom B
251	3-G	34A11122W02	Washer, GR
252	3-H	01A10210W02	Assy., Riv. Cover Bottom
254	3-G	15B11065W01	Guide, Photo
255	4-G	30T15126W01	Wire, PC Sensor(7P)
258	4-D	45A10101W01	Lever, Eject Sol
259	3-D	49A10131W01	Pulley, Idler
260	4-E	44A10133W01	Gear, Take Up
261	3-E	44A10134W01	Gear, Sun
262	3-E	44B10135W01	Gear, Fix
263	3-E	44B10136W01	Gear, Pause
264	3-F	44A10137W01	Gear, Pause Idler A
265	3-D	44A10379W01	Gear, Pause Idler B
266	3-E	44A10138W01	Gear, Reverse Idler
267	3-E	44A10139W01	Gear, Motor Idler
268	4-E	44A11062W01	Gear, Reel Idler
269	1-G	42A10380W01	Belt, GR
● 270	3-A	01V14700W68	Assy., GR Audio P.C. Board
■ 270	3-A	01V11500W19	Assy., GR Audio P.C. Board
▲ 270	3-A	01V11500W19	Assy., GR Audio P.C. Board
○ 270	3-A	01V11500W19	Assy., GR Audio P.C. Board
271	4-D	41A10097W02	Spring, Clutch
272	3-F	04B41345P15	Washer, Lock(M1.2)
273	4-D	04B41345P02	Washer, Lock(M1.7)
274	3-H	04B41345P17	Washer, Lock(M1)
275	2-D	04B41345P30	Washer, Lock(M3.1)
276	3-B	04B41345P32	Washer, Lock(M3.1)
277	4-E	04B41345P06	Washer, Lock(M2.1)
278	2-A	30T15126W02	Wire, PC Joint 7P
279	2-D	03S44205G78	Screw, Pan(M2x6)
280		03S44205G30	Screw, Pan(M2.6x4)
281	4-D	03S72235F38	Screw, Pan(M2x3.3)
282	3-F	03A12132W02	Screw, Eject Clutch (M2x2.3)
283		03S43997P64	Screw, Pan(M1.7x3)
284	3-F	41A10384W01	Spring, Eject Clutch
285	3-E	41A10385W01	Spring, Cas Push
286	2-C	41B10386W02	Spring, Sub Head
287	2-B	41A10387W01	Spring, Pinch Roller
288	3-D	43A12719W01	Roller, Pause
289	3-B	01B10381W01	Assy., Pinch Roller
290	2-B	84T10367W01	Head P.C. Board
● 291	4-E	01T15164W01	Assy., Reel
■ 291	4-E	01T15164W01	Assy., Reel
▲ 291	4-E	01T15164W02	Assy., Reel
○ 291	4-E	01T15164W01	Assy., Reel
292	4-E	04B41345P12	Washer, Lock(M1.7)
● 293	4-D	01A11078W01	Assy., Riv Lever Take Up
■ 293	4-D	01A11078W01	Assy., Riv Lever Take Up
▲ 293	4-D	01A11078W01	Assy., Riv Lever Take Up
○ 293	4-D	01A30161W01	Assy., Riv Lever Take Up
294	3-F	04B41345P34	Washer, Lock(M1.2)
295	4-D	75S12196W88	Rubber, Pad
		Miscellaneous	
● 501	2-B	88T15971W01	Head
■ 501	2-B	88T10373W01	Head
▲ 501	2-B	88T10373W01	Head
○ 501	2-B	88T10373W01	Head
502	4-E	01V11500W64	Assy., Motor
503	3-G	51T15144W01	Sensor, Photo
504	4-G	01T10371W01	R/F Sol. Assy.
505	4-F	40T15382W01	SW., Detector (Pack Down)
506	4-G	40T15382W01	SW., Detector(Metal)
507	2-C	40T15222W01	SW., Detector (Pack In)
508	2-D	01T15249W01	Assy., Play Solenoid
509	4-D	01T10369W02	Assy., Eject Solenoid

Notes : ● ; For GR75E020 model only ■ ; For GR75E010 model only
▲ ; For GR75E01A model only ○ ; For GR75E01C model only

Others ; Common

Exploded View (2/3)

● **For GR75L010/020 Models**



Cassette Deck Assembly Parts List (2/3)

Note : The parts without parts list are not supplied.

Symbol No.	IN-dex	Part No.	Description
203	3-C	43A11072W01	Roll, Sub Head
204		04B41345P01	Washer, Lock(M1.2)
206	2-B	41A21671W01	Spring, Head
207	2-B	03S40019G03	Screw, F-Locks(M2x4)
208	2-B	43B12545W01	Tape, Guide
210	4-C	01A10206W01	Assy., Riv Lever R/F Sol.
211	2-D	04B41345P29	Washer, Lock(M2.6)
213	2-D	44A10295W01	Gear, Sensor
214	2-D	14A10681W01	Reflector
215	3-E	44A10142W01	Gear, Planet
216	3-E	41A10097W02	Spring, Clutch
217	3-E	04B41345P31	Washer, Lock(M1.7)
218	3-E	01A21853W01	Assy., Riv Lever Reverse
219	4-B	07B10074W01	Holder, Cassette
220	5-B	43A12583W01	Roller, Eject
221	5-C	43A22153W01	Roller, Plate Base
222	5-C	44A82206F01	Rack
223	5-C	41B10386W03	Spring, GR(Rack)
224	4-C	43A10121W01	Roller, Eject(A)
225	4-D	43A10360W01	Roller, Eject(B)
226		04B41345P11	Washer, Lock(M1.2)
227	4-D	43A12377W01	Roller, Eject(C)
230	4-A	45B10376W01	Slider
231	4-B	47A63278F01	Shaft, Slider
232	4-A	01A10212W01	Assy., Riv Plate Base
233	4-C	41B10386W01	Spring, Eject Arm
234	4-B	01A21754W01	Assy., Riv Eject Arm(A)
235	3-B	01B10381W02	Assy., Pinch Roller
236	4-C	45A10087W01	Lever, Pack In SW.
237	4-F	44A20314W01	Pinion, Eject
238	4-E	44A13617W01	Gear, Motor Idler(B)
239	3-E	01A10201W02	Assy., Riv Lever Pause
240	2-D	45A10092W01	Lever, Play
241		76T10374W01	Chip
242	1-G	04S40075G05	Washer, Polyslider (M2.1)
243	1-G	01A10368W01	Assy., Flywheel
244	3-F	44A10141W02	Gear, Eject Idler
245	3-E	01A10205W02	Assy., Riv Lever Clutch(A)
246	3-F	44A10145W01	Gear, Eject
247	2-B	01V23700W03	Assy., GR Control P.C. Board
248	3-G	43A90918F01	Spacer, Polyslider
249	3-F	44A11063W01	Gear, Bottom(A)
250	3-F	44A11064W01	Gear, Bottom(B)
251	3-G	34A11122W02	Washer, GR
252	3-H	01A10210W02	Assy., Riv. Cover Bottom
254	3-G	15B11065W01	Guide, Photo
255	4-G	30T15126W01	Wire, PC Sensor(7P)
258	4-D	45A10101W01	Lever, Eject Sol.
259	3-D	49A10131W01	Pulley, Idler
260	4-E	44A10133W01	Gear, Take Up
261	3-E	44A10134W01	Gear, Sun
262	3-E	44B10135W01	Gear, Fix
263	3-E	44B21670W01	Gear, Pause
264	3-F	44A10137W01	Gear, Pause Idler(A)
265	3-D	44A10379W01	Gear, Pause Idler(B)
266	3-E	44A10138W01	Gear, Reverse Idler
267	3-E	44A10139W01	Gear, Motor Idler
268	4-E	44A11062W01	Gear, Reel Idler
269	1-G	42A10380W01	Belt, GR
★ 270	3-A	01V11500W19	Assy., GR Audio P.C. Board
◆ 270	3-A	01V14700W68	Assy., GR Audio P.C. Board
271		41A10097W02	Spring, Clutch
272	3-F	04B41345P15	Washer, Lock(M1.2)
273	4-D	04B41345P02	Washer, Lock(M1.7)
274	3-H	04B41345P17	Washer, Lock(M1)
275	2-D	04B41345P30	Washer, Lock(M3.1)
276	3-B	04B41345P32	Washer, Lock(M3.1)
277	4-E	04B41345P06	Washer, Lock(M2.1)
278	2-A	30T15126W02	Wire, PC Joint 7P
279	2-D	03S44205G78	Screw, Pan(M2x6)
280		03S44205G30	Screw, Pan(M2.6x4)
281	4-D	03S72235F38	Screw, Pan(M2x3.3)
282	3-F	03A12132W02	Screw, Eject Clutch (M2x2.3)
283		03S43997P64	Screw, Pan(M1.7x3)
284	3-F	41A10384W01	Spring, Eject Clutch
285	3-E	41A10385W01	Spring, Cas. Push
286	2-C	41B10386W02	Spring, Sub Head
287	2-B	41A10387W01	Spring, Pinch Roller
288	3-D	43A12719W01	Roller, Pause
289	3-B	01B10381W01	Assy., Pinch Roller
290	2-B	84T10367W01	Head P.C. Board

Notes : ★ ; For GR75L010 model only ◆ ; For GR75L020 model only
Others : Common

Symbol No.	IN-dex	Part No.	Description
291	4-E	01T15164W03	Assy., Reel
292	4-E	04B41345P12	Washer, Lock(M1.7)
293	4-D	01A11078W01	Assy., Riv Lever Take Up
294	3-F	04B41345P34	Washer, Lock(M1.2)
295	2-B	26A20537W01	Shield, Plate

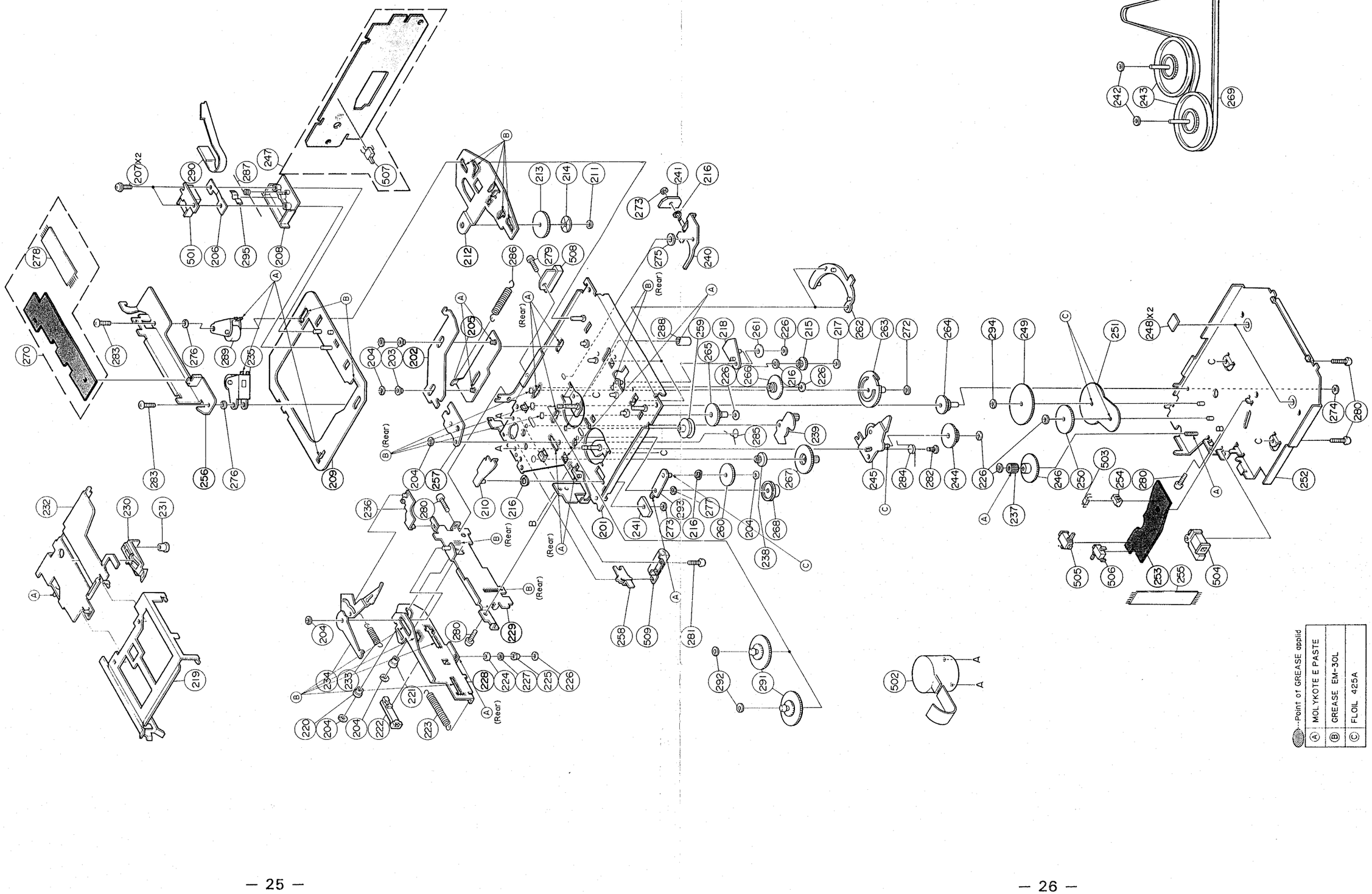
Miscellaneous

Symbol No.	IN-dex	Part No.	Description
★ 501	2-B	88T10373W01	Head
◆ 501	2-B	88T15971W01	Head
502	4-E	01V23900W60	Assy., Motor
503	3-G	51T15144W01	Sensor, Photo
504	4-G	01T10371W01	R/P Sol. Assy
505	4-F	40T15382W01	SW., Detector (Pack Down)
506	4-G	40T15382W01	SW., Detector (Metal)
507	2-C	40T15222W01	SW., Detector (Pack In)
508	2-D	01T15249W01	Assy., Play Solenoid
509	4-D	01T10369W02	Assy., Eject Solenoid

Notes : ★ ; For GR75L010 model only ◆ ; For GR75L020 model only
Others ; Common

Exploded View (GR-Y Series) (3/3)

● For GR75L02Y Model



Symbol No.	IN-dex	Part No.	Description
291	4-E	01T15164W03	Assy., Reel
292	4-E	04B41345P12	Washer, Lock(M1.7)
293	4-D	01A30161W01	Assy., Riv Lever Take Up
294	3-F	04B41345P34	Washer, Lock(M1.2)
295	2-B	26A20537W01	Shield, Plate
		Miscellaneous	
501	2-B	88T15971W01	Head
502	4-E	01V23900W60	Assy., Motor
503	3-G	51T15144W01	Sensor, Photo
504	4-G	01T10371W01	R/F Sol. Assy
505	4-F	40T15382W01	SW., Detector (Pack Down)
506	4-G	40T15382W01	SW., Detector (Metal)
507	2-C	40T15222W01	SW., Detector (Pack In)
508	2-D	01T15249W01	Assy., Play Solenoid
509	4-D	01T10369W02	Assy., Eject Solenoid

Cassette Deck Assembly Parts List (GR-Y Series) (3/3)

Note : The parts without parts list are not supplied.

Symbol No.	IN-dex	Part No.	Description
203	3-C	43A11072W01	Roll, Sub Head
204		04B41345P01	Washer, Lock(M1.2)
206	2-B	41A21671W01	Spring, Head
207	2-B	03S40019G03	Screw, F-Locks(M2x4)
208	2-B	43B12545W01	Tape, Guide
210	4-C	01A10206W01	Assy., Riv Lever R/F Sol.
211	2-D	04B41345P38	Washer, Lock(M2.6)
213	2-D	44A10295W01	Gear, Sensor
214	2-D	14A10681W01	Reflector
215	3-E	44A10142W01	Gear, Planet
216		41A10097W02	Spring, Clutch
217	3-E	04B41345P31	Washer, Lock(M1.7)
218	3-E	01A21853W01	Assy., Riv Lever Reverse
219	4-B	07B10074W01	Holder, Cassette
220	5-B	43A12583W01	Roller, Eject
221	5-C	43A63281F01	Roller, Plate Base
222	5-C	44A82206F01	Rack
223	5-C	41B10386W03	Spring, GR(Rack)
224	4-C	43A10121W01	Roller, Eject(A)
225	4-D	43A10360W01	Roller, Eject(B)
226		04B41345P11	Washer, Lock(M1.2)
227	4-D	43A12377W01	Roller, Eject(C)
230	4-A	45B10376W01	Slider
231	4-B	47A63278F01	Shaft, Slider
232	4-A	01A10212W01	Assy., Riv Plate Base
233	4-C	41B10386W01	Spring, Eject Arm
234	4-B	01A21754W01	Assy., Riv Eject Arm(A)
235	3-B	01B10381W02	Assy., Pinch Roller
236	4-C	45A10087W01	Lever, Pack In SW.
237	4-F	44A20314W01	Pinion, Eject
238	4-E	44A13617W01	Gear, Motor Idler(B)
239	3-E	01A10201W02	Assy., Riv Lever Pause
240	2-D	01A30879W01	Assy., Riv. Play Sol.
241		76T10374W01	Chip
242	1-G	04S40075G05	Washer, Polyslider (M2.1)
243	1-G	01A10368W01	Assy., Flywheel
244	3-F	44A10141W01	Gear, Eject Idler
245	3-E	01A10205W02	Assy., Riv Lever Clutch(A)
246	3-F	44A10145W01	Gear, Eject
247	2-B	01V23700W04	Assy., GR Control P.C. Board

Symbol No.	IN-dex	Part No.	Description
248	3-G	43A90918F01	Spacer, Polyslider
249	3-F	44A11063W01	Gear, Bottom(A)
250	3-F	44A11064W01	Gear, Bottom(B)
251	3-G	34A11122W02	Washer, GR
252	3-H	01A10210W02	Assy., Riv. Cover Bottom
254	3-G	15B11065W01	Guide, Photo
255	4-G	30T15126W01	Wire, PC Sensor(7P)
258	4-D	45A10101W01	Lever, Eject Sol.
259	3-D	49A10131W01	Pulley, Idler
260	4-E	44A10133W01	Gear, Take Up
261	3-E	44A10134W01	Gear, Sun
262	3-E	44B10135W01	Gear, Fix
263	3-E	44B21670W01	Gear, Pause
264	3-F	44A10137W01	Gear, Pause Idler(A)
265	3-D	44A10379W01	Gear, Pause Idler(B)
266	3-E	44A10138W01	Gear, Reverse Idler
267	3-E	44A10139W01	Gear, Motor Idler
268	4-E	44A11062W01	Gear, Reel Idler
269	1-G	42A10380W01	Belt, GR
270	3-A	01V33300W03	Assy., GR Audio P.C. Board
272	3-F	04B41345P15	Washer, Lock(M1.2)
273		04B41345P02	Washer, Lock(M1.7)
274	3-H	04B41345P17	Washer, Lock(M1)
275	2-D	04B41345P30	Washer, Lock(M3.1)
276	3-B	04B41345P32	Washer, Lock(M3.1)
277	4-E	04B41345P37	Washer, Lock(M2.1)
278	2-A	30T15126W02	Wire, PC Joint 7P
279	2-D	03S44205G78	Screw, Pan(M2x6)
280		03S44205G30	Screw, Pan(M2.6x4)
281	4-D	03S72235F38	Screw, Pan(M2x3.3)
282	3-F	03A12132W02	Screw, Eject Clutch (M2x2.3)
283		03S43997P64	Screw, Pan(M1.7x3)
284	3-F	41A10384W01	Spring, Eject Clutch
285	3-E	41A10385W01	Spring, Cas. Push
286	2-C	41B10386W02	Spring, Sub Head
287	2-B	41A10387W01	Spring, Pinch Roller
288	3-D	43A12719W01	Roller, Pause
289	3-B	01B10381W01	Assy., Pinch Roller
290	2-B	84T35271W01	Head P.C. Board